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Fortieth Biennial Report  
OF THE  
NORTH CAROLINA  
STATE BOARD OF HEALTH

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July 1, 1962-June 30, 1964



# MEMBERS OF THE STATE BOARD OF HEALTH

## Appointed by the Governor

LENOX D. BAKER, M.D., *President*

Appointed 1956

Term expires 1965

BEN W. DAWSEY, D. V. M.

Appointed 1959

Term expires 1967

GLENN L. HOOPER, D. D. S.

Appointed 1961

Term expires 1965

D. T. REDFEARN, B. S.

Appointed 1961

Term expires 1965

SAMUEL G. KOONCE, Ph. G.

Appointed 1963

Term expires 1967

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## Elected by the Medical Society of the State of North Carolina

JOHN R. BENDER, M. D., *Vice-President*

Elected 1949

Term expires 1965

OSCAR S. GOODWIN, M. D.

Elected 1960

Term expires 1967

JAMES S. RAPER, M. D.

Elected 1963

Term expires 1967

\*JOHN S. RHODES, M. D.

Elected 1963

Term expires 1965

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## EXECUTIVE COMMITTEE

JOHN R. BENDER, M. D., *Vice-President*

GLENN L. HOOPER, D. D. S.

BEN W. DAWSEY, D. V. M.

J. W. R. NORTON, M. D., *Secretary*

LENOX D. BAKER, M.D., *President* (Attends without a vote)

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## EXECUTIVE STAFF AS OF JUNE 30, 1964

J. W. R. NORTON, M.D., M.P.H., *Secretary and State Health Director*  
(Term expires June 30, 1967)

JACOB KOOMEN, JR., M.D., M.P.H., *Assistant State Health Director*  
(Term concurrent with the State Health Director)

J. M. JARRETT, B.S., *Director, Sanitary Engineering Division*

FRED T. FOARD, M.D., *Director Epidemiology Division*

ROBERT D. HIGGINS, M.D., M.P.H., *Director, Local Health Division*

E. A. PEARSON, JR., D.D.S., M.P.H., *Director, Oral Hygiene Division*

JAMES F. DONNELLY, M.D., *Director, Personal Health Division*

LYNN G. MADDY, Ph.D., M.S.P.H., *Acting Director, Laboratory Division*

EDWIN S. PRESTON, M.A., LL.D., *Public Relations Officer*

\_\_\_\_\_, *Director, Administrative Services*

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\* Dr. John S. Rhodes elected to fill unexpired term of Dr. Charles R. Bugg, Deceased December 11, 1963.

# STATE BOARD OF HEALTH

5 members appointed by Governor (G) — 4 members elected by Medical Society of the State of North Carolina (S)  
(Year given indicates expiration of present term)

## BOARD MEMBERS

LENOX D. BAKER, M.D., (G), President, 1965, Durham

JOHN R. BENDER, M.D., (S), Vice-Pres., 1965	D. T. REDFEARN, B.S., (G), 1965	Wadesboro
DEN W. DAWSEY, D.V.M., (G), 1967	JAMES S. RAPER, M.D., (S), 1967	Asheville
GLENN L. HOOPER, D.D.S., (G), 1965	SAMUEL G. KOONCE, Ph.G., (G), 1967	Chadbourne
OSCAR S. GOODWIN, M.D., (S), 1967	JOHN S. RHODES, M.D., (S), 1965	Raleigh

J. W. R. NORTON, M.D., M.P.H., STATE HEALTH DIRECTOR AND SECRETARY TREASURER  
JACOB KOOMEN, JR., M.D., M.P.H., ASSISTANT STATE HEALTH DIRECTOR

## EPIDEMIOLOGY DIVISION

FRED T. FOARD, M. D.

Accident Prevention Section (Home-Farm)  
Communicable Disease Control Section  
Occupational Health Section  
Public Health Statistics Section  
Radiation Protection Section  
Tuberculosis Control Section  
Venereal Disease Control Section  
Veterinary Public Health Section

## SANITARY ENGINEERING DIVISIONLOCAL HEALTH DIVISION

J. M. JARRETT, B. S.

Engineering Section  
Public Water Supplies  
Sewage Disposal  
Radiation Monitoring  
Air Pollution Control  
Insect-Rodent Control Section  
Bedding  
Entomology  
Malaria Control  
Salt Marsh Mosquito Control  
Sanitation Section  
Environmental  
Institutional  
Milk  
Public Food and Lodging  
Shellfish

ROBERT D. HIGGINS, M.D., M.P.H.

Administrative Section  
Health Education Section  
Public Health Nursing Section

## PERSONAL HEALTH DIVISION

JAMES F. DONNELLY, M. D.

Cancer-Heart-Chronic Disease Section  
Crippled Children Section  
Maternal-Child Health Section  
School Health Coordinating Service—  
Jointly with Education Department  
Nursing Home Section  
Nutrition Section

## ADMINISTRATIVE SERVICES

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Central Files  
Film Library  
Health Mobilization  
Personnel  
Public Health Library  
Public Relations  
Supply and Service

## ORAL HYGIENE DIVISION

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Prevention  
Fluoridation  
School Health Services  
Dental Inspections  
Dental Referrals  
Dental Corrections  
Education  
Classroom talks and demonstrations  
Literature, Puppet Show, Exhibits  
Consultation  
Research

## LABORATORY DIVISION

LYNN G. MADDRY, Ph.D., Acting Director

Administrative  
Mailing Room  
Laboratory Farm  
Cytology  
Chemistry  
Radiation  
Bacteriology  
Microscopy  
Syphilis Serology  
Virology  
Water Bacteriology  
Laboratory Approval and Certification



## LOCAL HEALTH DIRECTORS IN NORTH CAROLINA, JUNE 30, 1964

<i>Department</i>	<i>Health Director</i>	<i>Address</i>
Alamance	Dr. W. L. Norville	Burlington
Alleghany-Ashe-Watauga	Dr. Mary B. H. Michal	Boone
Anson	Dr. D. W. Davis, PT	Wadesboro
Avery	Dr. Mary B. H. Michal	Newland
Beaufort	Dr. W. A. Browne	Washington
Bertie	Dr. Karl Van Horn	Windsor
Bladen	Dr. Caroline Callison	Elizabethtown
Brunswick		Southport
		Shallotte
Buncombe	Dr. H. W. Stevens	Asheville
Burke	Dr. G. F. Reeves	Morganton
Cabarrus	Dr. John D. Workman	Concord
Caldwell	Dr. William Happer	Lenoir
Carteret	Dr. Luther Fulcher, PT	Beaufort
Catawba-Lincoln-Alexander	Dr. William H. Bandy	Hickory
Cherokee-Clay-Graham	Dr. W. H. Scruggs	Murphy
Cleveland	Dr. Z. P. Mitchell	Shelby
Columbus	Dr. J. R. Black	Whiteville
Craven	Dr. W. A. Browne	New Bern
Cumberland	Dr. M. T. Foster	Fayetteville
Currituck	Dr. W. W. Johnston	Currituck
Dare	Dr. W. W. Johnston	Manteo
Davidson	Dr. Dermot Lohr	Lexington
Davie-Yadkin	Dr. A. J. Holton	Mocksville
Duplin	Dr. John F. Powers	Kenansville
Durham	Dr. O. L. Ader	Durham
Edgecombe	Dr. J. S. Chamblee	Tarboro
Forsyth	Dr. Robert P. Locey	Winston-Salem
Franklin	Dr. J. B. Wheless, PT	Louisburg
Gaston	Dr. B. M. Drake	Gastonia
Granville	Dr. J. U. Weaver	Oxford
Greene	Dr. Joseph L. Campbell	Snow Hill
Guilford	Dr. E. H. Ellinwood	Greensboro
Halifax	Dr. Robert F. Young	Halifax
Harnett	Dr. Melvin F. Eyerman	Lillington
Haywood	Dr. Raymond K. Butler	Waynesville
Henderson	Dr. J. D. Lutz, PT	Hendersonville
Hertford-Gates	Dr. Quinton E. Cooke	Winton
Hoke	Dr. Harry H. McLean, PT	Raeford
Hyde	Dr. W. W. Johnston	Swan Quarter
Iredell	Dr. Ernest Ward	Statesville
Jackson-Macon-Swain	Dr. James T. Googe	Sylva
Johnston	Dr. Robert D. Phillips	Smithfield

<i>Department</i>	<i>Health Director</i>	<i>Address</i>
Jones	Dr. L. E. Kling	Trenton
Lenoir	Dr. L. E. Kling	Kinston
McDowell	Dr. W. F. E. Loftin	Marion
Madison	Dr. Margery J. Lord, PT	Marshall
Martin	Dr. Grover C. Godwin, PT	Williamston
Mecklenburg	Dr. Maurice Kamp	Charlotte
Mitchell-Yancey	Dr. T. F. Hahn, Jr.	Burnsville
Montgomery	Dr. Edward C. Humphrey	Troy
Moore		Carthage
Nash	Dr. J. S. Chamblee	Nashville
New Hanover	Dr. C. B. Davis	Wilmington
Northampton	Dr. W. R. Parker	Jackson
Onslow	Dr. Eleanor Williams	Jacksonville
Orange-Person-Chatham- Lee-Caswell	Dr. O. David Garvin	Chapel Hill
Pamlico	Dr. L. E. Kling	Bayboro
Pasquotank-Perquimans- Camden-Chowan	Dr. Isa Grant	Elizabeth City
Pender	Dr. N. C. Wolfe, PT	Burgaw
Pitt	Dr. R. E. Fox	Greenville
Randolph	Dr. H. C. Whims	Asheboro
Richmond	Dr. Clem Ham	Rockingham
Robeson	Dr. E. R. Hardin	Lumberton
Rockingham	Dr. C. T. Mangum, PT	Spray
Rowan	Dr. M. K. Holler	Salisbury
Rutherford-Polk		Rutherfordton
Sampson	Dr. Caroline Callison	Clinton
Scotland	Dr. Clem Ham	Laurinburg
Stanly	Dr. Edward C. Humphrey	Albemarle
Stokes	Dr. J. S. Taylor, PT	Danbury
Surry	Dr. Robert Caldwell	Mount Airy
Transylvania	Dr. John R. Folger, PT	Brevard
Tyrrell-Washington	Dr. Claudius McGowan, PT	Plymouth
Union	Dr. Conway Anderson Bolt	Monroe
Vance	Dr. J. U. Weaver	Henderson
Wake	Dr. M. B. Bethel	Raleigh
Warren	Dr. Robert F. Young	Warrenton
Wayne	Dr. Carl Hammer	Goldsboro
Wilkes	Dr. A. J. Holton	North Wilkesboro
Wilson	Dr. Joseph Campbell	Wilson
Charlotte City of	Dr. Maurice Kamp	Charlotte
Rocky Mount, City of	Dr. J. S. Chamblee	Rocky Mount



NORTH CAROLINA

## STATE BOARD OF HEALTH

RALEIGH 27602

### MEMBERS

LENOX D. BAKER, M. D., PRES.	DURHAM
JOHN R. BENDER, M. D., VICE PRES.	WINSTON SALEM
BEN W. DAWSEY, D. V. M.	GASTONIA
GLENN L. HOOPER, D. D. S.	DUNN
OSCAR S. GOODWIN, M. D.	APER
D. T. REDFEARN, B. S.	WADESBORO
JAMES S. RAPER, M. D.	ASHEVILLE
SAMUEL G. KOONCE, PH. G.	CHADBOURN
JOHN S. RHODES, M. D.	RALEIGH

J. W. R. NORTON, M. D., MPH  
STATE HEALTH DIRECTOR  
AND  
SECRETARY TREASURER

December 15, 1964

JACOB KOOMEN, JR., M. D., MPH  
ASSISTANT STATE HEALTH DIRECTOR

The Honorable Terry Sanford  
Governor of North Carolina  
The State Capitol  
Raleigh, North Carolina

Dear Governor Sanford:

Pursuant to the provisions of Chapter 130, Article II, Paragraph 12, General Statutes of North Carolina, I herewith submit to you, and through you, to the General Assembly of North Carolina, the Biennial Report of the North Carolina State Board of Health for the fiscal years of July 1, 1962 - June 30, 1964.

Respectfully submitted,

*J. W. R. Norton*  
J. W. R. Norton, M. D.,  
State Health Director

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# REPORT OF THE SECRETARY-TREASURER AND STATE HEALTH DIRECTOR

July 1, 1962-June 30, 1964

Abridged report of the activities of the State

Board of Health as recorded in the Minutes:

July 18, 1962. The quarterly meeting of the North Carolina State Board of Health was held Wednesday, July 18, 1962, 10:00 a.m. - 1:00 p.m., in the Board Room of the Cooper Memorial Health Building,—President Charles R. Bugg, M.D., presiding.

Attending: Dr. Charles R. Bugg; Dr. John R. Bender; Dr. Ben Dawsey; Mr. Jasper C. Jackson; Dr. Oscar S. Goodwin; Dr. Glenn Hooper and Mr. D. T. Redfearn.

Mr. Jackson moved that the minutes of the last meeting of May 9, 1962, be approved as circulated, and amended. The motion was seconded by Mr. Redfearn and carried unanimously.

Dr. Jacob Koomen, Jr., Assistant State Health Director, presented and discussed the tentatively approved "A" Budget which covers support of our activities as carried on from year to year and the "B" Budget which is the plea for new funds to expand activities or to strengthen old ones. Dr. Koomen presented three sets of materials: (1) large legal size sheets giving "State General Fund Appropriation by Program"; (2) "Summary of "A" and "B" Requests"; and (3) "B" Budget Request. He explained each of these in detail.

In response to a question asked by Dr. Bender concerning the dental program, Mr. Charles L. Harper, Director of Administrative Services, replied that up to this time Dr. Pearson had not had a sufficient number of applicants to fill the twenty-three already budgeted positions for public health dentists and for that reason no additional positions had been requested. Dr. Pearson advised Mr. Harper just this morning that he has applicants to fill the existing vacancies, plus two more positions. Dr. Hooper moved that this Board approve, when the time comes, a request for three additional dentists to bring the number of field or local dentists to twenty-six. The motion was seconded by Dr. Bender and carried unanimously.

Dr. Dawsey commended Dr. Koomen on the way the budget had been presented.

Dr. Goodwin moved that the Board support the budget as proposed, including the request for three additional dentists proposed by Dr. Hooper. The motion was seconded by Mr. Redfearn and carried.

Mr. Redfearn brought up the reluctance of some county commissioners to appropriate enough money for local public health programs and cited seven counties in particular. Dr. Norton replied that he and others had been meeting with the county commissioners and with the Association's Executive Committee for several years and has been able to get more and more understanding on budget matters. At this time it is largely a problem of the

counties having to put up so much money building schools and responding to another big pressure from the Welfare Department. During recent years Welfare funds have been increased enormously. For health, our matching ratio is on a 50-50 basis whereas Welfare is on a 4-1-1 basis, 4 federal for 1 county and 1 State. With this kind of leverage, there is great pressure on county commissioners to take care of building schools and increased appropriation for Welfare, since the health department has much less leverage. The county money problem is not a problem of communication with the county commissioners or their understanding. Actually, the problem is not so much with the county commissioners but with the State and National Legislatures which have not been providing their share for local departments. Discussions have also been held with Mr. Coltrane in which we all recognize that we have been going along for several years without any considerable State increases for health work even though there have been increases for schools and welfare. We have been in continuing consultation with Mr. Coltrane all through the preparation of this budget and with Dr. Hargrove on the request for funds for community mental health services.

Mr. Harper commented on the Merit System setup in the State Agencies and in local departments. By federal requirement all agencies receiving federal funds must operate in accordance with the rules and regulations set forth by the Merit System. One of the very important functions of the Merit System is to establish a compensation and classification plan. It has been optional in the counties this past year but mandatory as of July 1 unless sufficient reason can be documented, county by county, not to adopt the standard classification-pay scales.

Dr. Koomen reported on the hepatitis situation and stated that so far 1,045 cases have been recorded this year. This is approximately equal to the number recorded at the same time last year; however, based on the experience of recent weeks it appears that the epidemic is tapering off. He pointed out that there was a possibility of growing a hepatitis vaccine in tissue culture now that liver cells had been grown. This has not yet been achieved, however.

Also, Dr. Koomen discussed the experience of North Carolina regarding poliomyelitis and said that so far this year only one paralytic case has been reported. One other case is presently under investigation with the hope that a final diagnosis can be established soon. It was pointed out that last year there were nine paralytic cases and one death occurred. North Carolina's experience to-date in 1962 has been most encouraging.

A brief statement relative to communicable disease control regulations was made by Dr. Koomen. He discussed the American Public Health Association's Manual CONTROL OF COMMUNICABLE DISEASES IN MAN and its possible use as a communicable disease code in North Carolina. No action was recommended or taken, but it was suggested that Board members study the manuals sent to them to be ready to consider at a later date adoption of certain sections by reference.

At this point Dr. Koomen reported on a recent meeting of the Governor's Coordinating Committee on Traffic Safety and discussed the five points that were listed by this Committee as objectives for legislative action. These are as follows:

1. Additional highway patrolmen
2. Chemical tests for intoxication plus an improved definition of what constitutes driving while under the influence
3. Additional traffic engineers
4. Special licenses for teenagers
5. An improved court system

On motion of Dr. Goodwin, seconded by Mr. Jackson, the Board unanimously expressed its full support of this five-point legislative program for Traffic Safety.

Dr. Hooper moved that the State Board of Health send notice of the above action to the Governor and to the Medical Society of the State of North Carolina, the N. C. Dental Society, the N. C. Pharmaceutical Society, and such other health related State organizations as might be encouraged to act in support of these legislative objectives of the Governor's Coordinating Committee on Traffic Safety. Motion seconded by Mr. Redfearn and unanimously passed.

Dr. Norton brought to the Board's attention a report on mental health which had been made to Governor Sanford and that had already been distributed to the Board. The Governor had requested the Southern Regional Education Board of Atlanta to provide a highly qualified panel to survey North Carolina's mental health services and needs and present recommendations. About the middle of April this panel made this survey and their report to the Governor was dated June 1. Included in the material sent to the Board members were Dr. Norton's comments on the report. The Medical Society has changed its position:—In earlier action this Society recommended that the community mental health services be transferred to the Hospitals Board of Control; the Society at its May meeting urged that these services remain with the State Board of Health since the State and local health departments are already providing preventive and epidemiological services in the community and have had more experience dealing with local officials, whereas the principal experience of the Hospitals Board of Control has been in operating the State treatment-custodial hospitals. The Hospitals Board of Control passed this report out to their Board members and they discussed it at their meeting June 28. The Board felt no action was indicated at the time. There is a request in the budget of the State Board of Health for continued support of these community mental health services. The general reaction in the discussion was that we have made considerable progress with limited funds and it seems that there is no urgent need for transfer to another Board. The SREB report indicated an impression that by pulling all the mental health services together some improvement might be brought about. Our problem has been that the State Board of Health has not been authorized to employ a psychiatrist to head our mental health work here on our staff. We have not been allowed by the Personnel Department to pay salaries comparable to those that these professional workers can get in the mental hospital system through the Advisory Budget Commission.

Dr. James F. Donnelly, Director of Personal Health Division, discussed a special communication reported in the Journal of the American Medical Association, Volume 180, page 80, 1962, concerning a very high occurrence of a congenital abnormality, phocomelia, which has been linked to the use

of thalidomide as a tranquilizer or anti-nausea tablet. This drug was placed on the market in West Germany, Great Britain, Portugal, and Canada, and perhaps other countries and sold across the counter without prescription. It is estimated that 5,000 children will eventually be involved with this particular congenital malformation. The malformation varies from minor disturbances of development of the extremities to total absence. Polydactylism and syndactyly are common. Other abnormalities noted are disturbance of development of the external ear, facial paralysis, facial hemangiona, saddle nose, malrotation of the gut with duodenal stenosis and anal atresia. There are also many of the children with severe malformations of the heart and great vessels. In the adult, prolonged use of the drug results in a polyneuritis with atrophy of the muscles of the hand. In the U.S.A. the drug was licensed for manufacture by Merrell Company under the trade name of Kevadon, however, it was not released by the Food and Drug Administration for general use in the United States and has been withdrawn from the market. The medical profession in the United States has been warned by numerous articles in scientific journals and newspapers as well as through the other news media.

A second article has appeared in the March 15 issue of the American Journal of Obstetrics and Gynecology that summarizes the effects of maternal medications upon the fetus and newborn infant. In this article numerous drugs which are known to cause fetal pathology are listed and mode of action is described.

Dr. Donnelly also reported that in June the North Carolina State Board of Health through the Chronic Disease Section was granted \$31,000 to conduct a survey of the services available for the diagnosis and treatment of neurologic and sensory diseases. This survey will be carried out under the direction of Dr. Charles M. Cameron, Jr., of the School of Public Health of the University of North Carolina in cooperation with those persons interested in this field.

Mr. W. S. McKimmon, Chief of the Engineering Section, presented a petition for the extension of the boundary lines of the Haw River Sanitary District, Alamance County, to include an area of 16.4 acres, to improve the sanitary conditions in the area. He stated that the Sanitary Engineering Division had investigated the proposed territory to be annexed and had also reviewed all documents pertaining to the annexation and found them in order. It was the opinion of the Sanitary Engineering Division that proposed territory should be annexed in order to improve the sanitary conditions of the community and recommended that the State Board of Health approve the requested extension of the boundary lines of the district. On motion of Dr. Dawsey, seconded by Mr. Jackson, the **EXTENSION OF THE BOUNDARIES OF THE HAW RIVER SANITARY DISTRICT, ALAMANCE COUNTY**, was approved.

Mr. McKimmon also presented a petition from the City of Wilson requesting permission to permit controlled fishing from boats at certain areas from the banks, designated by a representative of the State Board of Health, and duck hunting, during the season, from controlled blinds, with proper sanitary facilities on or at Wiggins Mill Reservoir, the City of Wilson's Class I Reservoir. Mr. McKimmon stated that he and Mr. W. J. Stevenson,



Engineer with the Sanitary Engineering Division, had investigated the reservoir and were of the opinion that because of the area and capacity of the reservoir that the above controlled recreational activities would have very little, if any, adverse effect on the quality of the water in the reservoir. He also stated that the Sanitary Engineering Division had reviewed the ordinance adopted by the Board of Commissioners of the City of Wilson to control the recreational activities on or at the reservoir and found it to be satisfactory. Therefore, Mr. McKimmon requested the State Board of Health consider the request of the City of Wilson with favor and grant them permission to institute the proposed recreational activities on or at Wiggins Mill Reservoir. On motion of Dr. Dawsey, seconded by Mr. Redfearn, the State Board of Health gave its approval of the REQUEST BY THE CITY OF WILSON TO PERMIT CONTROLLED FISHING FROM BOATS AND AREAS FROM THE BANK DESIGNATED BY A REPRESENTATIVE OF THE STATE BOARD OF HEALTH ON OR AT WIGGINS MILL RESERVOIR, AND ALSO TO PERMIT DUCK HUNTING DURING THE REGULATION SEASON FROM CONTROLLED BLINDS. Motion carried.

As information, Dr. Norton read a letter from the President of Pfeiffer College expressing appreciation and thanks to members of the staff for their services to the directors of the Pfeiffer-North Stanly Water Association and for their helpfulness to the citizens of that location relative to the new water line to be extended from Albemarle to Misenheimer, North Carolina.

Dr. Norton reported that Mrs. Mary King Kneedler, Chief of the Public Health Nursing Section, has resigned as of July 31, 1962. Her husband has taken a teaching position in the western part of the State in the Western Carolina College at Cullowee and it was necessary for her to resign in order to move with her husband to live in that area. Dr. Norton expressed regret and paid tribute to Mrs. Kneedler for the valuable services she has rendered the State Board of Health during her tenure of office.

Dr. William L. Wilson, Chief of Occupational Health-Radiation Section, presented a brief summary on "Potential Deficiencies Created by 1961 Amendment to GS 130-11 (5)" and distributed to those present copies of the statement which quoted the law, presented factual data reflecting experience in North Carolina since 1935, and illustrated several points. Currently only 0.006 per cent of the population requires 73 per cent of engineering staff time and 70 per cent of our mobile Xray unit availability. This leaves 27 per cent of engineering and 30 per cent of Xray capacity to serve over 99 per cent of the remaining 1.5 million employees. This limited engineering personnel and Xray capacity are obviously inadequate. He emphasized that all current services must continue but brought out the fact that a very few additional staff members could greatly reduce the neglect of many working people who are not now being served, and that these additional personnel have been included in the "B" Budget for 1963-'65.

Dr. Wilson also gave a very informative and interesting report on the "Radiological Health Program Developed Up To June 30, 1967." Dr. Wilson mentioned several details concerning progressive procurement of up-to-date equipment; the staffing and equipping of a modern electronic shop where

the expensive equipment will be regularly calibrated and repaired, and batteries replaced or recharged. In addition he listed the training status of the current staff, gave details concerning the time required of twenty-three members of the staff who must devote part-time to this program, as they have been doing in the past, plus seven full-time employees now made possible due to the emergency allotment of funds by the Council of State January 29, 1962, projected into 1963, and extended in the "B" Budget of the State Board of Health for 1963-'65.

On motion duly made and seconded, the meeting adjourned at 1:10 p.m.

November 29, 1962. The regular quarterly meeting of the North Carolina State Board of Health was held Thursday, November 29, 1962, 10:00 a.m.-1:15 p.m., in the Board Room of the Cooper Memorial Health Building,—President Charles R. Bugg, M.D., presiding.

Attending: Charles R. Bugg, M.D., President  
John R. Bender, M.D., Vice-President  
Ben W. Dawsey, D.V.M.  
Lenox D. Baker, M.D.  
Jasper C. Jackson, Ph.G.  
Oscar S. Goodwin, M.D.  
Glenn L. Hooper, D.D.S.  
D. T. Redfearn, B.S.

The meeting was called to order by President Bugg, and an introduction was made of several visitors representing the Advisory Council of the Nursing Home Association, the Motel Operators Association, and members of the press.

On motion of Dr. Dawsey, seconded by Dr. Bender, the minutes of the Board meeting held on July 18, 1962, were approved as circulated.

Mr. Charles L. Harper, Director of Administrative Services, made a progress report of the Budget Hearing, September 20, 1962. Mr. Harper also distributed a chart showing requested appropriation for State and Federal Funds, 1960-1963, and explained the percentages of Federal Funds; the increase in grants for chronic and heart diseases; the new radiological health grant and a decrease in the general health grant and the tuberculosis grant fund. The recommendation of the Advisory Budget Commission will not be known until the Legislature convenes.

Proposed regulations for Nursing Home Licensure were presented by Mr. W. G. Poole, Chief of the Nursing Home Section. These proposed regulations were submitted following their approval by the Nursing Home Advisory Council. It was moved by Dr. Baker and seconded by Dr. Hooper that the suggested regulations for the dietary department be approved. Motion carried.

Considerations were given to the suggested standards of physical therapy services in licensed nursing homes as submitted by the Nursing Home Advisory Council. It was moved by Dr. Baker and seconded by Mr. Jackson that the suggested regulations for Physical Therapy be reworked in keeping with the principles set forth in the proposed regulations. Carried.

The Nursing Home Advisory Council recommended that the "Law, Rules and Regulations and Code Governing the Sanitation of Private Hospitals, Sanatoriums, Sanitariums and Educational Institutions" have added to the

title "and Nursing Homes" and become the law, rules and regulations and Code for Nursing homes as well as other institutions. It was moved by Dr. Baker and seconded by Dr. Bender, and carried.

Upon recommendation by the North Carolina Association of Nursing Homes, Mrs. Edith Chance was appointed to succeed herself for a three-year term. The motion was made by Mr. Jackson and seconded by Dr. Goodwin. The motion was carried.

It was moved by Dr. Baker and seconded by Dr. Hooper that Mr. Everette C. Carnes succeed Mr. Seth Hollowell for a three-year term to the Nursing Home Advisory Council.

The third vacancy on the Advisory Council was not filled but it was moved by Dr. Baker and seconded by Dr. Hooper that the words "recommended by the North Carolina Dental Society" and the regulations governing appointment to the Advisory Council of the Nursing Home Section be deleted and that the North Carolina Dental Society would be given the opportunity to submit for consideration the name of a dentist to be appointed as a dental member. The motion was carried. Though no formal motion was taken, the wish was expressed, and no objection raised, that the current representative of the North Carolina Dental Society continue to serve until his successor is appointed.

At this point, Dr. Baker made reference to a letter which he had written to Mr. Poole, suggesting standards concerning an occupational therapy department in nursing homes. No formal action was taken on the letter; however, it was suggested that the Nursing Home Advisory Council give thought to the possibility of such a department.

A hearing was given to a committee of the Nursing Home Advisory Council consisting of Dr. D. A. McLaurin, Mrs. Edith Chance, Mr. Travis Tomlinson, and Mr. Joseph Barnes concerning action taken by the Board of Health relative to recommendations of the Nursing Home Advisory Council at its meeting held May 9, 1962. It was moved by Dr. Baker and seconded by Dr. Goodwin that the following be accepted as the definition of a nursing home: "A Nursing Home is a facility which is designed and equipped to provide nursing care and related medical services for three or more persons unrelated to the licensee who have ailments for which individualized medical and nursing care is indicated. These patients do not require the special facilities of a general hospital but will require services not usually found in a home for the aged (boarding home). These patients will require continuing medical supervision; however, nursing care is their primary need and must be provided by or under the supervision of a registered nurse." Carried.

Following considerable discussion, it was moved by Dr. Bender and seconded by Dr. Baker that "a registered graduate nurse shall, if feasible, be in charge of the nursing service of a nursing home, effective 1 July, 1963. Feasibility shall be determined by the Nursing Home Advisory Council, subject to the approval of the State Board of Health." Carried.

Mr. J. M. Jarrett, Director of the Sanitary Engineering Division, discussed the evaluation of "Destroilet" as a device to prevent pollution of recreational waters by sewage from boats. Mr. Jarrett stated that for

some time the Sanitary Engineering Division and the State Stream Sanitation Committee had been working to get a satisfactory unit which could be installed on boats. He described the "Destroilet" unit in detail, and stated that when properly installed, maintained, and operated, it would effectively prevent pollution by sewage from boats as well as from land establishments. Also, if acceptable to the Board, he stated that he would like to distribute this information to local health departments. Dr. Baker moved, seconded by Dr. Goodwin, that the Board accept the use of this type of "Destroilet" device as described by Mr. Jarrett as to its sanitary usage. Motion carried.

Mr. Jarrett discussed the creation of the West Smithfield Sanitary District in Johnston County. He stated that investigations had been made of the area and all necessary transactions and documents required by law have been checked with the Attorney General's Office; and, he recommended that the Board adopt the resolution authorizing the creation of the West Smithfield Sanitary District. On motion of Dr. Dawsey, seconded by Mr. Jackson, the RESOLUTION OF THE NORTH CAROLINA STATE BOARD OF HEALTH CREATING THE WEST SMITHFIELD SANITARY DISTRICT LOCATED IN JOHNSTON COUNTY, was adopted.

Mr. Jarrett also discussed the question of swimming pool legislation. He stated that a number of requests have been received from local health departments as well as the industry involved wanting the establishment of uniform minimum design and operation criteria. He proposed the continuation of his study and the development of enabling legislation authorizing the State Board of Health to establish standards of design and operation, and authorizing local health departments to adopt ordinances governing design, construction, operation and safety. Mr. Jackson moved that Mr. Jarrett continue his good work and report back to the Board. Motion seconded by Mr. Redfearn, and carried.

Mr. Jarrett discussed briefly the activity of the Sanitary Engineering Division in the field of air pollution and pointed out that at the present time there is no State legislation officially designating any agency as the air pollution unit. Since this is a growing problem and the number of inquiries and requests for assistance is increasing, he asked if it was the wish of the Board that he attempt to develop some type of legislation in the field of air pollution to be presented to the 1963 General Assembly after its approval by the State Board of Health. On motion of Dr. Baker, seconded by Dr. Dawsey, Mr. Jarrett was advised to proceed to develop such legislation. Motion carried.

Also, Mr. Jarrett stated that the Sanitary Engineering Division has worked for a number of years with the Waterworks Operators Association in conducting training courses and assisting with the plan of voluntary certification for water plant operators. There is an increase in the desire of the operators that they be officially recognized. Over a period of two years a number of conferences have been held with the North Carolina League of Municipalities and other groups considering this problem. Mr. Jarrett proposed that he be allowed to continue the development of the certification plan which could be adopted by the State Board of Health as an amendment to the water supply regulations. Should the

Attorney General rule that existing laws do not permit this, then he would like to propose an amendment to the Water Supply Laws which would give this authority. Details of the plan would be presented to the Board at its next meeting after he has conferred with the Attorney General. Dr. Dawsey moved, seconded by Mr. Jackson, that Mr. Jarrett proceed with his plans for amendment to the water regulations as discussed. Motion carried.

Dr. Jacob Koomen, Jr., Assistant State Health Director, asked the Board to consider authorizing the preparation of legislation in two areas to be sponsored by the State Board of Health. These areas were as follows:

1. Enabling legislation permitting collection of fees by local health departments in home care nursing programs. On motion of Dr. Baker, seconded by Mr. Jackson, the preparation of such legislation and sponsorship by the State Board of Health was authorized and directed.
2. Dr. Koomen told of the need for a revision of the laws relating to death registration. He indicated that there had been various meetings with the organizations involved which had resulted in agreement on the necessity for such revision. On motion of Dr. Dawsey, seconded by Dr. Goodwin, preparation of enabling legislation for a revision of laws relating to death registration was authorized.

Dr. Koomen also presented and discussed other proposals of legislation of health interest which are to be sponsored by various organizations and agencies, including the N. C. Medical Society, the State PTA, and the Governor's Coordinating Committee on Traffic Safety. He also told of a suggestion which had come to the Board to make alcoholism a reportable disease. He indicated that letters had been sent to all health departments of other states asking whether or not this was being done, and, if so, the basis upon which alcoholism was determined to be a reportable disease. From the few replies received to date, no state health department so far replying is making alcoholism a reportable disease.

Dr. Norton made a brief report on various items of interest to the Board:

1. Receipt of a letter from Governor Terry Sanford requesting that he discuss "Public Health from 1900 to 1962, and the future prospects from 1962 through 1976." Quite an assignment, he said, but that he and his staff are working on it and he would try to present something worthwhile when called upon.
2. Distributed a list of State needs by Governor Sanford and another by Mr. Thad Eure as probably among proposals to be presented to the General Assembly.
3. Distributed and discussed briefly statements and recommendations from the Medical Society of the State of North Carolina, the N. C. Academy of General Practice, the N. C. Pediatric Society, and a telegram from Dr. E. T. Beddingfield, Chairman, Committee on Legislation, N. C. Medical Society, regarding the future of the Mental Health Program in North Carolina. A copy of the first draft of the Bill creating a Department of Mental Health, etc., had been circulated to Board members previously. He also mentioned a public hearing to be held November 30 on this matter to be followed by further discussion by the Executive Council of the Medical Society on December 9. No action taken.

Dr. E. A. Pearson, Jr., Director of the Division of Oral Hygiene, read a letter addressed to the State Board of Health from Dr. Angus McBryde,

Division of Pediatrics, Duke University Medical Center, suggesting that the children at the Butner Institution, sorely needed to have a fluoridated water supply and urged that this be implemented as soon as possible. After hearing Dr. McBryde's letter, the Board of Health re-affirmed its endorsement of fluoridation of municipal water supplies as a preventive health measure in the prevention of dental decay. It was pointed out that available evidence shows that handicapped persons experience more dental decay and other dental disorders than the general population. Therefore, the many children residing in such institutions and nearby families served by these water supplies would be afforded the beneficial effects provided through fluoridation of these water supplies to an even greater degree. Dr. Baker moved, seconded by Dr. Hooper, that the State Board of Health recommend to the N. C. Hospitals Board of Control that the water supplies at Caswell School in Kinston, O'Berry Hospital at Goldsboro, Murdock Hospital, Umstead Hospital and the Blind Rehabilitation Center at Butner, be fluoridated. Motion unanimously carried.

Dr. Baker also moved that the N. C. Dental Society be asked to write a letter to the N. C. Hospitals Board of Control, urging said Board to fluoridate the water supplies at the above named institutions. Motion seconded by Dr. Hooper, and carried.

Dr. William L. Wilson, Chief, Occupational Health-Radiation Section, summarized the current status of the regulations which are the responsibility of the State Board of Health in order to protect and promote the public health in the presence of hazardous radiation sources in the State.

Dr. Wilson also differentiated between the procedures, registration, licensing, regulatory activities, consultation, educational programs and other responsibilities either authorized or required for State Board of Health activities.

A published statement, in detail, with reference to the above will be mailed to Board members.

On motion duly made and seconded, the meeting adjourned at 1:15 p.m.

**February 21, 1963.** A special call meeting of the State Board of Health was held Thursday, February 21, 1963, 10:00 a.m.-1:00 p.m. in the Board Room of the Cooper Memorial Health Building, Dr. John R. Bender, Vice-President, presiding, and Dr. Edwin S. Preston, Public Relations Officer, delivered the invocation.

Attending: John R. Bender, M.D., Vice-President; Ben W. Dawsey, D.V.M.; Lenox D. Baker, M.D.; Roger W. Morrison, M.D.; Jasper C. Jackson, Ph.G.; Oscar S. Goodwin, M.D.; Glenn L. Hooper, D.D.S.; and D. T. Redfearn, B.S.

The meeting was called to order by Vice-President Bender. Dr. Bender welcomed the members of the Board and thanked them for their presence at the special call meeting. He called on Dr. Norton to give a report on the condition of Dr. Bugg, President of the Board.

Dr. Norton reported that a call that morning to Dr. Lee Sanders, one of Dr. Bugg's associates, indicated that Dr. Bugg had had a comfortable night. He is in an oxygen tent. The coronary attack of five nights ago seems not of the massive type. He is under some sedation. The whole

report from the beginning has been encouraging and he is now relatively free of pain and has rested well. He is not permitted visitors. A card was made available for the Board members to sign to express their best wishes. Dr. Hooper moved "that we take up a collection from the Board members and along with the card send Dr. Bugg some flowers." Motion seconded by Mr. Jackson, and carried unanimously.

On motion of Dr. Dawsey, seconded by Dr. Hooper, the minutes of the Board meeting held on November 29, 1962, were approved as circulated.

Mr. J. M. Jarrett, Director, Sanitary Engineering Division, presented a request for the creation of a Sanitary District in Chatham County to be known as the Goldston-Gulf District. Gulf was once incorporated as a town but has been inactive for a number of years, and the citizens of these communities desire water and sewerage facilities. All documents are in order and there was no expressed opposition at the public hearing. Mr. Jarrett recommended approval. Upon motion of Mr. Jackson, seconded by Dr. Dawsey, the RESOLUTION OF THE NORTH CAROLINA STATE BOARD OF HEALTH CREATING THE GOLDSTON-GULF SANITARY DISTRICT LOCATED IN CHATHAM COUNTY, NORTH CAROLINA, was authorized.

Mr. Jarrett then presented a request that the boundaries of the Haw River Sanitary District be extended. All of the property owners involved had petitioned that they be included within the District. He recommended the extension. Upon motion of Dr. Goodwin and seconded by Mr. Redfearn, the Board authorized the RESOLUTION OF THE NORTH CAROLINA STATE BOARD OF HEALTH EXTENDING THE BOUNDARY LINES OF THE HAW RIVER SANITARY DISTRICT, ALAMANCE COUNTY, NORTH CAROLINA.

Mr. Jarrett presented a request for extension of boundaries of the Walkertown Sanitary District. A number of people owning property contiguous to the present boundaries had petitioned that their property be included in the Sanitary District. One hundred per cent of those affected signed the petition. All documents were found in order and Mr. Jarrett recommended approval. Upon motion of Dr. Dawsey, seconded by Dr. Hooper, the Board authorized the RESOLUTION OF THE NORTH CAROLINA STATE BOARD OF HEALTH EXTENDING THE BOUNDARY LINES OF THE WALKERTOWN SANITARY DISTRICT, FORSYTH COUNTY, NORTH CAROLINA.

Mr. Jarrett then presented a request for the creation of the Sedgfield Sanitary District in Guilford County. Several years ago a private water and sewerage system served the Sedgfield Inn and adjacent community. The sewerage system has needed renovating and rebuilding to serve the current population. A petition bearing signatures of over 51% of the property owners involved was presented to the county commissioners and State Board of Health. Two public hearings have been held and all documents have been checked and found in order. Mr. Jarrett recommended approval. Upon motion of Mr. Jackson, seconded by Dr. Dawsey, the Board authorized the RESOLUTION OF THE NORTH CAROLINA STATE BOARD OF HEALTH CREATING THE SEDGFIELD SANITARY DISTRICT LOCATED IN GUILFORD COUNTY, NORTH CAROLINA.

Mr. Jarrett then presented an amendment to the Rules and Regulations and Code Governing the Sanitation of Private Hospitals, Sanatoriums, Sanitariums and Educational Institutions, copies of which had been mailed to Board members. The amendment provides that in inspection and rating of private educational institutions separate grades be provided to each individual foodhandling unit, based on inspection in accordance with a special score sheet. Grades would be posted in each food serving unit and the separate grade for the dormitory facilities would be posted in the manager's office. The original regulations and score sheet were developed in 1946. This change is recommended because of the growth and change since then in operations of private educational institutions resulting sometimes in more than one foodhandling unit at one institution and also sometimes under different managements. Upon motion of Mr. Jackson and seconded by Dr. Hooper, the regulations were amended.

Mr. W. Gordon Poole, Chief, Nursing Home Section, was called on to present the name of a representative of the North Carolina Dental profession to the Nursing Home Advisory Council. Dr. Jere Roe was recommended to succeed himself for a term to expire in 1965. On motion of Dr. Hooper, seconded by Dr. Goodwin, Dr. Roe was unanimously re-elected for a three-year term.

Dr. R. D. Higgins, Director, Local Health Division, gave a preliminary report on the bill entitled AN ACT TO CREATE A STATE DEPARTMENT OF MENTAL HEALTH. He presented the members a copy of the latest draft of a bill prepared by the State Committee on Reorganization of State Government and a typewritten explanation of the sections referred to in the bill.

Dr. Robert M. Fink, Consultant in the Mental Health Section, then commented that the President of the United States had made an unusual State of the Union Message directly related to the mental health and mental retardation. In it he requested the Congress to make separate broad and long-range approaches to these problems throughout the United States. Related to this we have available to us at the present time Federal funds in the amount of \$95,400, which must be matched by State funds in equal amount, and the total may be used only for the purpose of long-range planning for mental health and mental illness in the State of North Carolina. We anticipate that an equal amount of money will be available for the period July 1964 through June 1965, thus making over a two-year period, assuming the State matches these funds, something in the neighborhood of \$400,000 for long-range, intensive planning. The Federal Government has laid down certain requirements, which he read. This department and the State Hospitals Board of Control have been studying the possible plans and we have reached a common agreement on a general type of plan, of which Board members have been provided a copy. Dr. Eugene A. Hargrove, Commissioner of Mental Health, N. C. Hospitals Board of Control, called a meeting of the Interagency Council on Mental Health on February 15. This included representatives of several agencies now involved with mental illness problems. At that time, this general plan was presented to this group of agency representatives as a possible approach to long-range planning. This group in general endorsed the plan with a few relatively minor



alterations and recommendations, the idea being that with the Governor's approval the State Mental Health Council which is set up by law and to which certain members are designated in the law and now has about 30 agencies within the State would become the active planning body to carry through the total plan and operation. It would set up an over-all planning committee which would be invited by the Governor to serve and the Council would be empowered to employ needed paid planning staff for the next two years. This planning staff would be responsible for working with and for task forces each of which would study certain specific areas such as services for children. These task forces would be made up of subcommittees consisting of professional personnel plus other citizens in the State who have concern and interest in these fields. They would survey the existing resources, collect data and come up with recommendations as to the future direction and priorities which the State should follow in facing the problems of mental health and illness. These recommendations would be made to the Mental Health Authority, the Governor and the Legislature. The planning staff under direction of the Council would actively go out into various counties in the State to meet with various groups to promote and aid in local planning and gain local opinions on recommendations to be developed.

Dr. Norton reported that we received from Dr. Hargrove only last Thursday a final draft of the bill referred to by Dr. Higgins. We immediately sent copies out to Board members. Mr. Coltrane asked for comments in writing. "Confidential" was put at the top, but Dr. Norton commented that he thought Board members should know what had been written to Mr. Coltrane.

Dr. Norton reported further that following the meeting of this Inter-agency Committee discussed by Dr. Fink, Governor Sanford asked Drs. Hargrove and Norton to come over to his office yesterday afternoon. Dr. Hargrove discussed the Federal plan and the Interagency meeting with the Governor, who commented that he thought this was a very good approach. The Governor did question our need in planning for the large amount of Federal money available to be matched by State money. He said we have had this Mental Health Council going quite some time as authorized by statute and we do not even have a part-time secretary for the Council. Then to jump from that to \$190,000 a year would be rather abrupt, and he questioned this heavy spending if we could get by with an adequate but lesser amount. He did approve the general plan and said that to the ones selected to work on these committees he would be glad to write a letter and send it out requesting them to serve.

In the President's message referred to by Dr. Fink, the President made specific appeal for an enlargement of mental health efforts. He also made a separate recommendation on mental retardation.

One of the comments made in the memo to Mr. Coltrane on the proposed bill to set up a State Department of Mental Health was with regard to mental retardation after talking with Dr. Carroll about it. There are variations of mental retardation and perhaps some of them might very well come under Dr. Carroll and the general teaching system, rather than being placed

under the department that has charge of the mental hospitals. Some of the pediatricians feel that they were perhaps in a better position to understand the over-all situation with retarded children than some of the psychiatrists. The bill creating a Mental Health Department has not been introduced but is expected to be introduced very shortly. There probably will be public hearings on it.

Dr. Goodwin said he would like to take this opportunity to commend Dr. Norton for what has been done and that it was most commendable to bring together these different committees from different organizations that will be directly interested.

Dr. Norton stated that this was just a progress report and he did not think it required any recommendation for action at this time.

Dr. Morrison asked if the Mental Health Council has taken a stand on the bill to create a State Mental Health Department. Dr. Norton answered that the Mental Health Council would be meeting the next day. It has not met since this proposed bill was prepared for introduction so they have not taken a stand. Dr. Fink commented that some member organizations which are represented on the Council have taken a stand in favor of certain provisions of this bill. Dr. Morrison mentioned the report of the three Southern Regional Education Board consultants and asked why they wanted to consolidate this into one straight line. No one offered an answer to Dr. Morrison's question.

Dr. Norton said there had been no reference to the fact that there was also a public hearing on what should be done held by the Committee on Reorganization of State Government Subcommittee on Mental Health, Dr. Fred Weaver of Chapel Hill, Chairman. At that time a large number of people expressed themselves with regard to setting up a new Department of Mental Health. For the most part, including Dr. Beddingfield who spoke for the Legislative Committee of the Medical Society, they said that in general they liked the idea of bringing mental health together in one department. Dr. Norton reported that at the public hearing he commented that whatever the final decision is that we are very much interested in mental health and have been trying to build up community mental health services, and that whatever the outcome, we will continue to be interested in mental health and will work in every way we can to promote mental health under whatever organization the General Assembly leaves it with.

Dr. William L. Wilson, Chief, Occupational Health-Radiation Section, discussed the activities of the Board which have been undertaken up to now with reference to a State radiation protection program under the 1959 Acts of Congress and the North Carolina General Assembly. Dr. Wilson also reported on the current North Carolina House Bill 34 which would exempt many hospital X-ray facilities from the State Act completely. He furnished Board members with a written statement of questions and answers related to H. B. 34 and reported that hurried analysis of the Bill seems to confirm that it would prevent the Board's program and regulations developed during the past three years from producing a uniformly effective protection program for the State. The Board was informed that Dr. Norton had written Mr. Thomas H. Woodard, Chairman of the House Committee on Health,

requesting time to make adequate study of and detailed statement upon the Bill soon after March 21, 1963, when the Atomic Energy Commission meets. Dr. Baker moved, Mr. Jackson seconded, that the written statements be received by the Board as information, that an effort be made to learn who had sponsored the Bill, and that the possible protection reducing effects of its enactment be discussed with Representative Woodard who introduced the Bill, and that the resulting information be reported to the Board at its next meeting.

Mr. Charles L. Harper, Director of Administrative Services, was present and reviewed briefly the status of the Department's budget request for 1963-'65. He distributed exhibits comparing the State biennial appropriation for 1959-'61 and 1961-'63, and the recommended "A" and "B" budget by the Advisory Budget Commission for 1963-'65. He discussed each exhibit presented and explained in the "B" budget for this biennium the amounts recommended against amounts originally requested. Mr. Harper also presented an exhibit of the State General Fund appropriation—by program, the "A" budget request for the 1963-'65 biennium compared with the actual budget for the 1961-'63 biennium. In summary, the staff recommendation on items to appeal to the Joint Appropriations Committee is as follows:—

**Dental Health—\$92,711, Cancer Control—\$215,754, Mental Health—\$481,450, Tuberculosis Control—\$17,098, Postage—\$25,634, Merit Salary Increments—\$2,438.** The total biennial sum included in the appeal is \$813,085\*. After discussion, it was moved by Dr. Hooper, seconded by Dr. Dawsey, that the Board endorse the budget as presented, and thanked and complimented Mr. Harper for the fine job that he and Mr. W. K. Parrish, the Budget Officer, had done in preparing and presenting this budget. Motion carried.

Dr. Jacob Koomen, Jr., Assistant State Health Director, reviewed briefly a report on a Tuberculosis Study in North Carolina prepared by the Governor's Advisory Committee on Tuberculosis. This survey of the present status of tuberculosis control in North Carolina, recently published in brochure form, indicates plans of action for tuberculosis control in the years ahead. Dr. Koomen commended the clarity and attractive presentation made in the report.

Dr. Koomen also reported progress on drafting proposed legislation to be introduced later to be sponsored by the State Board of Health. These proposals of legislation of health interest were in the following areas:—

1. **Air Pollution**—A bill which would designate the State Board of Health as the State agency to encourage and conduct studies and research on air pollution, to elicit the cooperation of all pollution sources to this end and to administer funds from Federal, State and other sources made available for this purpose.

2. **Swimming Pool Minimum Design and Sanitation Standards**—This bill confines itself to the sanitary and safety aspects of swimming pool construction, maintenance and operation.

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\* Subsequent to the Board meeting and prior to the appeal, \$200,000 of the Mental Health request was deleted at the request of the Commissioner of Mental Health since it was tied in with legislative proposals not yet considered by the Legislature.

3. **Death Certificate Regulations**—A bill to improve the speed of processing of death certificates and to clarify the official responsibility for prompt completion of the certification process. This bill was worked out in conference with all interested State-wide associations and agencies.

4. **Fees for Certain Home Care Services Provided by Local Health Departments**—This bill is enabling legislation which permits local health departments to establish a fee scale for certain home care services, such as home nursing and physical therapy. Fees would be charged where resources were available from the individual himself or as in the case of a welfare recipient, from other sources. Referral for these services would be made by the patient's personal physician.

5. **A Bill to be Entitled an Act Regulating the Sanitation of Agricultural Labor Camps** was discussed. This bill is essentially the same as introduced in 1961 with the addition of an Advisory Committee. The Governor's Committee on Migrant Labor, L. Y. Ballentine, Chairman, has asked that the State Board sponsor this bill.

On motion duly made and seconded, the meeting adjourned at 1:00 p.m.

**May 8, 1963.** The annual meeting of the North Carolina State Board of Health was held, as required by law, during the annual meeting of the Medical Society of the State of North Carolina, in the Sun Dial Room of the George Vanderbilt Hotel in Asheville, N. C. Wednesday, May 8, 1963, 8:30 a.m. to 9:30 a.m., Dr. John R. Bender, Vice-President, presiding. The invocation was given by Dr. Oscar S. Goodwin.

The meeting was called to order by Vice-President Bender. The following were in attendance: John R. Bender, M.D., Vice-President; Ben W. Dawsey, D.V.M.; Oscar S. Goodwin, M.D.; Roger W. Morrison, M.D.; Lenox D. Baker, M.D.; Jasper C. Jackson, Ph.G; and D. T. Redfearn, B.S.

The minutes of the previous meeting, as circulated, were approved. Dr. Bender read a letter from Dr. Bugg indicating that Dr. Bugg was recovering nicely from his earlier illness.

Dr. J. W. R. Norton, State Health Director, and Dr. Jacob Koomen, Assistant State Health Director, were renominated by Dr. Lenox D. Baker for four-year terms to begin July 1, 1963. The motion was seconded by Dr. Oscar S. Goodwin, and unanimously approved.

Expiration of terms of two Governor's appointees to the Board was discussed. Dr. Baker indicated he had informed the professional organizations of the members, Dr. Ben W. Dawsey, veterinarian, and Mr. Jasper C. Jackson, pharmacist, of the expiration of term. It was decided to take no further action. Dr. Baker noted the reappointment of Dr. Oscar S. Goodwin and appointment of Dr. James S. Raper by the Medical Society. The latter will succeed Dr. Roger W. Morrison.

Dr. Koomen reported the status of the various bills related to the State Board of Health:—migrant labor health, collection of fees in home care programs, swimming pool sanitation, death registration, and authorization as air hygiene authority. Dr. Baker discussed briefly the bill setting up a Department of Mental Health and its amendments.

Mr. Frank Hill next presented material relative to extending the boundary lines of the ROANOKE RAPIDS SANITATION DISTRICT, HALIFAX COUNTY, NORTH CAROLINA. The motion for acceptance, made by Dr. Baker, seconded by Dr. Dawsey, was unanimously approved.

Data relative to possible designation of a portion of "Local Health Funds" to be appropriated by the present Legislature for use in chronic disease programs was presented by Dr. Koomen. This manner of usage would make available certain Federal funds. Possible benefits of this approach were explained, as well as possible reservations about such use. The Board wished to consider the matter at a later meeting.

Presented last was information on a proposed Kannapolis Sanitary District. Dr. Koomen put before the Board data supplied by Mr. Jarrett and the petitioners from Kannapolis. A public hearing is to be held in Kannapolis on May 17; from that time to June 3, when the county commissioners are to meet, the petitioners hope the State Board of Health can meet to ratify the petition. A bond issue of 5.9 million dollars is involved and formation of this District represents great progress in sanitation facilities to 22,000-30,000 individuals.

Board members indicated enthusiastic willingness to meet to consider the proposal. Raleigh, May 30, at 2:00 p.m., was tentatively selected for this meeting. This matter is to be discussed with Dr. Norton and Board members are to be contacted relative to acceptability of this date. (Later, the meeting was set for 3:30 p.m. on that date.)

Dr. Bender adjourned the meeting so that all might be on schedule to be present during Dr. Baker's presentation of the Conjoint Report at the Conjoint Session with the Medical Society of the State of North Carolina.

May 30, 1963. A meeting of the North Carolina State Board of Health was held Thursday, May 30, 1963, 3:30 p.m., in the Board Room of the Cooper Memorial Health Building, Vice-President John R. Bender, M.D., presiding. Invocation was delivered by Dr. Glenn L. Hooper.

Attending: Dr. John R. Bender, Vice-President; Dr. Ben W. Dawsey; Dr. Lenox D. Baker; Dr. Oscar S. Goodwin; Mr. Jasper C. Jackson and Mr. D. T. Redfearn.

The meeting was called to order by Vice-President Bender.

On motion of Mr. Jasper C. Jackson, seconded by Mr. D. T. Redfearn, the minutes of the May 8, 1963, Board meeting were approved as circulated by the Secretary.

Dr. Norton gave the members of the Board a report on the present condition of Dr. Bugg. He has now been out of the hospital for about two weeks and is making good progress. He has not yet fully recovered the use of his left arm.

For informational purposes only, Mr. Charles L. Harper, Director of Administrative Services, reviewed the latest legislative developments with regard to the Board's biennial budget request as recommended by the Advisory Budget Commission. The Appropriations Committee of the General Assembly reduced the budget of the Board of Health by \$576,840,

which represents the entire amount of increase recommended by the Advisory Budget Commission for "aid to counties" in the "B" Budget. It raised the amount recommended for Salt Marsh Mosquito Control by \$60,000. Outside of these two changes the budget remains as recommended by the Advisory Budget Commission. The Board was apprised of efforts being made in an effort to restore the amount for "aid to counties."

Mr. J. M. Jarrett, Director of the Sanitary Engineering Division, presented a resolution regarding the creation of the Kannapolis Sanitary District, Cabarrus and Rowan Counties, North Carolina. He informed the State Board as to the various transactions concerning this proposed District relative to the petitions requesting the creation. He stated that certified copies of the resolution by the Board of Commissioners of Cabarrus and Rowan Counties, and affidavits and documents from a number of leading officials and organizations had been carefully examined by his Division. Mr. Daniel N. Cote, Assistant Regional Engineer of the Sanitary Engineering Division, was present and spoke on the need of a safe and adequate water supply and sewerage system with sewage treatment plant. Mr. Jarrett also stated that the transactions and documents pertaining to the creation of the proposed sanitary district had been discussed with Mr. Harry McGalliard, Assistant Attorney General, and in his opinion the procedures for creating the district were in accordance with the General Statutes of North Carolina. Mr. Jarrett recommended that the Board consider favorably the approval of this request. The matter was discussed and Mr. Redfearn suggested that a letter of congratulations be sent to the community leaders who were responsible for the promotion of this important sanitation project. Upon motion of Dr. Dawsey, seconded by Dr. Baker, the **RESOLUTION OF THE NORTH CAROLINA STATE BOARD OF HEALTH CREATING THE KANNAPOLIS SANITARY DISTRICT LOCATED IN CABARRUS AND ROWAN COUNTIES, NORTH CAROLINA**, was unanimously carried.

At this point, Dr. Bender asked that Dr. Norton be excused from the meeting. This suggestion was made in order that a discussion of Dr. Norton's salary might be presented. Dr. Jacob Koomen, Jr., Assistant State Health Director, and Mr. Harper, presented data relative to Dr. Norton's salary. The Board, in discussion, highly complimented Dr. Norton's work and status in health activities from a State, national and international viewpoint. On motion of Dr. Baker, seconded by Dr. Hooper, the Board recommended that a salary increase from \$19,000 to \$22,000 per annum be requested of the Advisory Budget Commission. Motion unanimously carried.

Dr. Koomen and Mr. Harper also discussed the physician pay scale noting that of sixteen physicians' positions only ten are presently filled. Of the ten positions on the staff, three are age 70 or over and two physicians will reach age 70 during the biennium. It was pointed out that the situation was under discussion with the State Personnel Department who, it is felt, are highly sympathetic toward the problem of physician recruitment and the problem of physician salary compensation.

Dr. Norton was reminded by Dr. Baker that he had been instructed by the Board to furnish a photograph of himself to be hung in the Board

Room. A similar request has been made of Dr. Charles R. Bugg, the President.

Dr. Baker reported that the Shriners of North America have approved the allocation of ten million dollars for the erection of three hospitals for the treatment of burns and that Duke and the University of North Carolina are among the 65 teaching hospitals being considered as sites. Dr. Baker suggested that the State Health Director accompany the Site Selection Committee of the Shriners on their tour at Duke, Friday, May 31, 1963. On motion of Dr. Hooper, seconded by Dr. Goodwin, the State Health Director was invited to accompany the Shriners. Motion unanimous.

On suggestion of Mr. Redfearn, the Board went on record as complimenting as a master piece Dr. Baker's address to the Conjoint Session of the State Board of Health and the Medical Society of the State of North Carolina, on May 8, 1963, in Asheville.

Dr. Edwin S. Preston, Public Relations Officer, made a report on the present status of legislation sponsored by the State Board of Health and other legislation which is health related. As of the date of the meeting, three bills sponsored by the State Board of Health have been enacted. These include (1) a law authorizing a program of air hygiene by the State Board; (2) a law clarifying death certificate procedures; and (3) a law permitting the State Board of Health to set up sanitary swimming pool standards of construction and operation for county adoption. Two other bills, migrant labor regulations and a bill authorizing local boards of health to accept fees for certain services are still in the legislative process and favorable action looks probable.

On motion duly made and seconded, the meeting adjourned.

**January 9, 1964.** The North Carolina State Board of Health met in quarterly session, Thursday, January 9, 1964, 10:00 a.m.-4:00 p.m., in the Board Room of the Cooper Memorial Health Building, Vice-President John R. Bender, presiding.

Chief Justice Emery B. Denny of the Supreme Court, administered the Oaths of Office to the following for four-year terms:—

#### **Governor Terry Sanford's Appointees**

Ben W. Dawsey, D.V.M., (G), 1967—Gastonia, (Re-appointed)  
Samuel G. Koonce, Ph.G., (G), 1967—Chadbourn

#### **Elected by the Medical Society of the State of North Carolina**

Oscar S. Goodwin, M.D., (S), 1967—Apex, (Re-elected)  
James S. Raper, M.D., (S), 1967—Asheville  
John S. Rhodes, M.D., (S), 1965—Raleigh, (Unexpired term of Dr. Charles R. Bugg, Deceased—December 11, 1963)

Attending: Dr. John R. Bender, Vice-President; Dr. Ben W. Dawsey; Dr. Glenn L. Hooper; Dr. Oscar S. Goodwin; Mr. D. T. Redfearn; Dr. James S. Raper; Mr. Samuel G. Koonce and Dr. John S. Rhodes.

Also present were a number of staff members and friends of the new members, including Mrs. Koonce.

The meeting was called to order by Vice-President Bender, and invocation delivered by Dr. Goodwin.

Dr. Bender said he would like to welcome Mr. Koonce, Dr. Raper and Dr. Rhodes to the Board, and expressed congratulations to each for being named to these positions. He also welcomed continuing service by Dr. Dawsey and Dr. Goodwin and assured them that each of the other Board members is delighted that they are to serve for another term.

Dr. Bender then called for nominations for President to serve a two-year term. Dr. Dawsey nominated Dr. John R. Bender for President and Dr. Hooper nominated Dr. Lenox Baker. Dr. Bender left the room and Dr. Dawsey took the Chair for election of the President and Vice-President.

A secret ballot was taken and after a majority vote in favor of Dr. Lenox D. Baker, another ballot made it unanimous.

Mr. Redfearn nominated Dr. Bender for Vice-President. Dr. Hooper moved that the nominations be closed and that Dr. Bender be elected Vice-President by acclamation. Dr. Goodwin seconded the motion, and it carried unanimously.

Dr. Bender returned to the Chair and congratulated the Board on their wisdom in electing Dr. Baker and also expressed his thanks for his reelection as Vice-President.

Dr. Norton read a letter from Dr. Baker, who was absent, suggesting that the Executive Committee be enlarged to three members including the Vice-President as Chairman with the President attending without a vote. This proposal was accepted and Dr. Dawsey nominated Dr. Glenn Hooper and Dr. Goodwin nominated Dr. Dawsey as members of the Executive Committee. These two were elected.

On motion of Dr. Dawsey, seconded by Dr. Hooper, the minutes of the May 30, 1963, Board meeting were approved as circulated by the Secretary.

Dr. Jacob Koomen, Jr., Assistant State Health Director, explained the role of the State Board of Health in the new law for testing the breath of persons suspected of being under the influence of intoxicating liquors and presented proposed regulations for consideration of the Board. Dr. Bender suggested that this item be left open for action later on in the day after the members had had time to think about it. This was done. Near the close of the meeting Dr. Dawsey moved acceptance of the Rules and Regulations, and Dr. Goodwin seconded the motion, and it was unanimously carried. It was requested that the records show that Dr. Bender gave opportunity for Board members and members of the public present to comment on the proposed regulations prior to action.

Dr. Koomen also discussed the reporting of communicable diseases and made the following suggestions:

Glanders—This disease can be dropped from the list.

Gastroenteritis with subheading salmonellosis, shigellosis, staphylococcus food poisoning, and other, or unknown. Some of these can now be accepted as infections so that they stand alone; adding a category of food poisoning or food intoxication, and under that should be staphylococcus and clostridial food intoxication and other.



Add the category of aseptic meningitis which is now an important disease.

Change the term "undulant fever" to the now more generally accepted term "brucellosis."

Include under salmonellosis, paratyphoid fever.

Scarlet fever has become steadily milder and does not need a separate category. It is a respiratory streptococcus infection and should be changed to streptococcus pharyngitis, including scarlet fever.

Jaundice—infectious, with subheading infectious hepatitis, serum hepatitis, leptospirosis—each of these diseases stands on its own.

Encephalitis can now be better defined and rather than listing it merely as "encephalitis, infectious," list it as "encephalitis, primary," those due to viruses that affect the nervous system and "encephalitis, post-infectious."

Dr. Dawsey moved the acceptance of these changes and Dr. Rhodes seconded the motion. Unanimously carried.

Dr. Koomen said that in 1962 the Board approved use of oral vaccine for children entering school. His question was:—in approving it for use in school children, did the Board intend approval of oral vaccine generally? Since there was uncertainty about this matter, Dr. Rhodes reported that the State Medical Society Committee had approved the use of oral vaccine and he moved that the State Board of Health approve the use of oral vaccine. Dr. Goodwin seconded the motion, and it carried unanimously.

Dr. Koomen brought to the attention of the members that the book entitled THE CONTROL OF COMMUNICABLE DISEASES IN MAN, which is revised every five years by the American Public Health Association, is approved in principle by the U. S. Public Health Service and is used by many states as a communicable disease code. The new tenth edition is expected to be available late this year and will be mailed to the Board members in the future.

Dr. Koomen announced that the Dr. Lynn Maddry family had had a tragic accident in the death of a son, Eugene William Maddry, on January 8, 1964, from a fall in regular gym exercises. Dr. Bender thought it would be fitting for the Board to express their sorrow to Dr. Maddry, and Dr. Dawsey suggested that flowers be sent from the Board. Dr. Norton was instructed to prepare and send an expression of sympathy for the Board.

Dr. Preston announced that arrangements had been made for the members to have lunch at the Elks Club and the time was set for 12:30 p.m.

Mr. W. Gordon Poole, Chief of the Nursing Home Section, announced that representatives of the Nursing Home Advisory Council were present, —Mr. Joseph E. Barnes, Administrator of Rex Hospital; Dr. D. A. McLaurin, representing the Medical Society and member of the Chronic Disease Committee and Mr. Travis Tomlinson, Administrator of Mayview Nursing Home. He also introduced Mr. Roddey Ligon of the Institute of Government, who has given them his wise counsel.

Mr. Poole presented proposed Rules and Regulations for Licensure of Nursing Homes, which had been mailed out to the Board members. These

were taken up and approved section by section and finally in *toto* subject to minor changes after an opportunity was given to Board and staff and the public to be heard. Dr. Hooper moved adoption, Dr. Rhodes seconded the motion, and it carried unanimously.

In a discussion of Class II Licenses, Dr. Norton expressed considerable concern over fires in nursing homes in other states, while at the same time recognizing the urgent need for nursing homes. After some discussion of the problem by common consent, the Board referred the problem to the Advisory Council to inspect the homes by committee delegation and make a report to the Board for action at its next meeting. Dr. Goodwin moved that the effective date of these regulations be March 1, 1964, seconded by Mr. Redfearn and unanimously carried.

With regard to the licensing of combination nursing and boarding homes, Mr. Poole asked the Board for authority to use and continue in effect the applicable Sections in the Rules and Regulations for Licensing Nursing Homes and the Rules and Regulations Governing the Licensing of Homes for the Aged and Infirm which were in effect at the time transferred to the State Board of Health until such time as new rules and regulations may be formulated and approved for combination homes. Dr. Dawsey moved adoption, seconded by Dr. Rhodes, and unanimously carried.

Mr. Poole presented names of three proposed successors for members of the Nursing Home Advisory Council whose terms have expired:—Mr. Rhett Ball of High Point to succeed Miss Ruth Current; Mrs. Marguerite Dunham to succeed Mr. Travis Tomlinson and Mr. William Randall to succeed himself. The Board unanimously elected all three.

Mr. Tomlinson was present, lives in Raleigh, and agreed that we may continue to call on him informally for counsel as needed.

Mr. Poole recommended that one additional Council member be appointed to represent a combination home of a religious denomination, another from a nonsectarian home, and that another member come from some Statewide organization, such as the North Carolina Conference for Social Service or some similar group. This was referred to the advisory council for study prior to further consideration by the Board. Motion made by Dr. Dawsey, seconded by Dr. Goodwin, and carried.

Dr. Norton invited attention to the framed picture of Dr. Charles R. Bugg recently hung in the Board Room.

Dr. Hooper moved, Dr. Goodwin seconded and the Board instructed the Secretary to write a letter of appreciation to Mr. Jasper C. Jackson for his most constructive services on the Board. This motion was unanimously carried.

Previously, a "Resolution of Respect for Dr. Charles Richard Bugg" was distributed to Board members and others. This memorial resolution was adopted. Copies were sent to Dr. Charles Bugg, for the family; the N. C. Medical Journal; the Journal of the AMA; Journal American Academy of Pediatrics; Journal of Pediatrics; the American Public Health Association; Secretary of the State Medical Society and the N. C. Public Health Association. The memorial resolution reads as follows:—

**"RESOLUTION OF APPRECIATION AND RESPECT****CHARLES RICHARD BUGG, M.D.**

"Nearly forty years ago a brilliant young Virginia physician came to Raleigh to practice pediatrics. He brought with him the best training of Johns Hopkins University followed by residency in Harriet Lane (Children's) Home. Most of all he brought gentleness, character and concern. It is not strange, therefore, that the death of Dr. Charles R. Bugg came like a death in the family to the community which loved him and to the wide circle of friends throughout the North Carolina he served as President of the State Board of Health.

"Dr. Charles R. Bugg, Raleigh pediatrician and President of the State Board of Health, died Wednesday, December 11, 1963. He had been ill since early this year when he suffered a heart attack. Death came at 8:50 a.m. at Rex Hospital. He was 67. Dr. Bugg is survived by a son, Dr. Charles P. Bugg, who has been in medical practice with his father; three sisters, Mrs. W. C. Duvall and Miss Virgilia Bugg, both of Farmville, Va., and Mrs. Lillian Pifer of Winchester, Va.; and two grandchildren. His late wife, Virginia Lindsay Sylvester, was the daughter of the long-time President of the University of Maryland, Richard William Sylvester.

"In the medical profession, he was known as a pioneer in the pediatrics field. To thousands of Raleigh parents over a span of almost four decades, he was the tall, gentle man who doctored their children. To public health, he was the considerate and strong leader of vision and unquestioned integrity.

"He was named to the State Board of Health by the Medical Society of the State of North Carolina in 1957. Dr. Bugg had served as President of the Board since 1958.

"A native of Farmville, Va., he came to Raleigh in 1925 to set up a practice in pediatrics with Dr. Aldert S. Root. Under the auspices of the Junior League of Raleigh, he and Dr. Root established and operated for many years the first pediatric clinic in Wake County. He was one of the leaders in the founding of the Hilltop Home for Retarded Children in Raleigh.

"Dr. Bugg was one of the pioneers in establishing pediatrics as a medical specialty in this State. He also was a leader in efforts to bring about an effective program of immunization for children.

"Dr. Bugg was a member of the staff of the old St. Agnes Hospital in Raleigh. He also was on the staffs of Rex and Wake Memorial Hospitals, and served as an instructor in pediatrics at the Duke University School of Medicine.

"Dr. Bugg attended the public schools of Farmville, Va., and was graduated from Hampden-Sydney College in 1916 with honors, including Phi Beta Kappa membership. He also played baseball and football there.

"He taught for a year in a private preparatory school before entering the Johns Hopkins School of Medicine. His medical education was interrupted by Army service in 1917-'18. He was graduated from Johns Hopkins in 1922.

"An editorial by Jonathan Daniels in the Raleigh News and Observer caught up the spirit of the man and gave the community estimate of Dr. Bugg:—

"Numberless families in Raleigh can now recall Charlie Bugg coming like tenderness from the night to the bedside of a tossing, fevered child. And he brought not only science but reassurance, healing knowledge and the sympathetic heart. Rich and poor had his ministrations. His wide smile was as familiar in the drab halls of old St. Agnes Hospital as in the cor-

ridors of newer Rex. The only test in his practice was that a child—any child anywhere—needed help.

'And his concern ran far beyond the possibilities of his own practice. He was one of the leaders in the establishment and operation of the first free clinic for babies in Raleigh. He worked to help create a home for those often most pitiful of our children, the retarded. And in the last years of his life as President of the North Carolina State Board of Health his happy helpfulness extended to all his fellow citizens, man and child alike.

'He was the good doctor. He was the beloved doctor. And in all aspects of his mind and spirit, he was a beautiful man.'

"Because Dr. Bugg has represented the people of North Carolina in promoting public health in an outstanding way during his years as member and President of the State Board of Health; because he has proved to be a person of highest integrity and of wise professional judgment in his consideration of health matters which have come before the State Board; and because public health and the citizens of our State will continue to owe a great debt to Dr. Bugg for his dedicated and effective service, the North Carolina State Board of Health wishes to express its appreciation of the life that he lived and the high service which he rendered to this State.

"THEREFORE, BE IT RESOLVED, that this expression of respect and appreciation be formally enacted by the State Board of Health and spread upon its official minutes, and that a copy be forwarded to the family of our departed friend to convey, though inadequately, the heartfelt sympathy of the members of the State Board, and

"BE IT FURTHER RESOLVED, that copies be also sent to the Editor, North Carolina Medical Journal; the Editor, Journal of the American Medical Association; the Editor, Journal of the American Academy of Pediatrics; the Editor, Journal of the American Public Health Association, the Secretary, Medical Society of the State of North Carolina; and to the Secretary, North Carolina Public Health Association.

"This 9th day of January, 1964."

The Board meeting recessed at 12:30 p.m. for lunch and re-convened at 1:30 p.m.

Dr. Hooper discussed the salary scale of some of the division directors and staff of the Board. In his report Dr. Hooper stated that North Carolina was not at the bottom of the scale list but there were a large number of our neighboring states ahead and he felt greatly concerned about this and suggested that the Board give consideration to the matter and take some definite action. He recommended that the Secretary express the concern of the Board regarding the relatively low salary scales and classifications now set by the Personnel Department. Dr. Goodwin moved that the Executive Committee, with Dr. Norton, study the salary problems and make appropriate recommendations to the Personnel Director. Motion seconded by Dr. Dawsey, and carried.

Mr. Charles L. Harper, Director of Administrative Services, was present and reported briefly on the status and planning for the 1965-'67 biennial budget proposal. He distributed an outline which is being used in connection with planning, which covers the following:—(1) the need for the program; (2) present program objectives; (3) present program; (4) effectiveness of program content and (5) proposed revisions and amendments to objectives and program content revised. Dr. Hooper moved, seconded by Dr. Rhodes that Mr. Harper's report be accepted. Passed.

Mr. J. M. Jarrett, Director of the Sanitary Engineering Division, discussed proposed criteria regarding discharge of sewage from boats on the Kerr Lake and Kerr Scott Lake. He presented a list of criteria to be used in approving sewage treatment devices on pleasure boats operating on these reservoirs. Approval of sewage disposal devices became necessary because of an order issued by the Corps of Engineers which have control over issuing permits for boats on Kerr Lake and Kerr Scott Lake. On motion of Mr. Redfearn, seconded by Dr. Goodwin, the proposed criteria regarding discharge of sewage from boats on Kerr Lake and Kerr Scott Lake, were passed.

Mr. Jarrett presented a request for the extension of the boundary lines of the Sedgefield Sanitary District, Guilford County. He stated that the annexation of the proposed territory, documents, as well as the various transactions relative to this extension, had been examined by his office and were in order, and he recommended favorable action by the Board. On motion of Dr. Dawsey, seconded by Dr. Hooper, the RESOLUTION OF THE NORTH CAROLINA STATE BOARD OF HEALTH EXTENDING THE BOUNDARY LINES OF THE SEDGEFIELD SANITARY DISTRICT IN GUILFORD COUNTY, NORTH CAROLINA, was passed.

Mr. Jarrett also presented and discussed a request for the extension of the boundary lines of the Rural Hall Sanitary District, Forsyth County. He recommended favorable action by the Board on this request, stating that all documents and transactions had been carefully examined and found in order by his Division. On motion of Dr. Dawsey, seconded by Dr. Hooper, the RESOLUTION EXTENDING THE BOUNDARY LINES OF THE RURAL HALL SANITARY DISTRICT IN FORSYTH COUNTY, NORTH CAROLINA, was carried.

Mr. C. M. White, Chief of the Insect and Rodent Control Section, was present and told the Board about some slight revisions in the local mosquito control project on August 22, 1963, by the Executive Committee. These revisions in the rules and regulations were deemed necessary for the promotion and protection of the public health. Dr. Hooper moved, seconded by Dr. Dawsey, that the Board approve the revisions in the rules and regulations of the State Board of Health Governing State Aid to Mosquito Control Districts or other Local Governmental Units Engaged in Mosquito Control Undertakings. Motion unanimously carried.

Dr. William L. Wilson, Chief of the Occupational Health-Radiation Section, presented and recommended approval of proposed North Carolina Regulations For Protection Against Radiation. He furnished the Board multiple references illustrating the points discussed. He reviewed the specific statutory authorities of the Board, the general authorizations for activities by the Board and emphasized the duties required of the Board by statutes. He reported that the Regulations, once approved and adequately implemented, will meet responsibilities of the Board and cited related responsibilities of other State agencies. Detailed points were identified and read from the Regulations. Copies of pertinent laws were identified and their major purposes were summarized.

Dr. Wilson stated that the need for a regulatory program in North Carolina was demonstrated by the finding of deficient or inadequate com-

pliance with generally accepted standards of radiation protection:—up to 83% in local health departments; to 80% for dental Xray machines (over 90% of which had been checked); 88% of the few physicians privately owned Xray machines; 94% of the 17 hospital Xray facilities examined; 94% of the privately owned veterinary Xray machines examined. The serious lack of control over radioactive materials was emphasized. It was pointed out that approximately 10 curies of radium were introduced into North Carolina in 1963 without any prior notification to the Board, bringing up to an estimated 67 curies of radium widely distributed throughout the State.

Dr. Wilson reviewed the means of the Board including budget, equipment, personnel, training and experience of staff. The existence of 21 recognized authorities, serving voluntarily, as consultants to the Board was reported along with recommendation that the Board approve establishment of a Medical Isotopes Advisory Group.

He confirmed the readiness of the Board's State Radiological Emergency Team to meet predictable serious emergencies in thorough coordination with the State Highway Patrol and the State Civil Defense Agency as well as neighboring states and federal agencies prepared to render assistance under such circumstances.

The Board was informed of the 7 remaining actions required along with estimated dates for each in order to implement the Regulations effective July 1, 1964.

Dr. Wilson recommended that the Board:—approve the Regulations, approve their submission to the Governor for his approval as required by statute, approve in principle amendment of the administrative organization for adequate implementation of the State Radiological Health Plan and of the Regulations for Protection Against Radiation, authorize the State Board of Health, Chief, Radiological Health Program, to administer the Radiological Health Plan and the Regulations For Protection Against Radiation as authorized by statutes and approved and directed by the State Health Director.

Prior to action on the proposed regulations for Protection Against Radiation Dr. Bender asked for any comments from Board members and from any person present. Let the record show that no opposing comments were made from Board members or from those members of the public who were present. Mr. Koonce moved the adoption of the Regulations For Protection Against Radiation. Motion seconded by Dr. Raper, and passed unanimously.

As information for the Board, Dr. Norton gave brief verbal reports on the following items of interest:—

(a) That Dr. Baker received one of the Cannon Awards during the recent Culture Week in Raleigh for his participation in the preservation of the Bennett Place near Durham.

(b) The North Carolina Fund, publicly announced last July—a \$14 million five-year fund, supplied mainly by the Ford, Reynolds and Babcock Foundations and supplemented by many other private contributors, for ten comprehensive experimental projects to be coordinated to

help break the "cycle of poverty." Our local health departments have already been requested to send in information on activities which could be undertaken in their area toward utilization of some of this Fund for the promotion of health and the reduction of poverty in their areas. Several suggestions and proposals have been received. The deadline for project proposals has been set as February 1, 1964.

(c) The Ford Foundation is sponsoring a trip for seven State Health Directors from India and Dr. Norton has been invited by the Ford Foundation to accompany them on their visit of about a month while in this country. The group plans to arrive January 25 for their first week in Chapel Hill and Raleigh. Dr. Dawsey stated that he considered this an honor and moved, seconded by Dr. Rhodes, that Dr. Norton be wholeheartedly approved to participate in this assignment. Motion unanimously carried.

(d) The Triangle Health Council under the leadership of Durham industrialist, Mr. Watts Hill, Sr., has been set up and a director employed to survey and set up an organization to meet hospital and medical care needs of people living in the Triangle area—Durham, Orange and Wake counties.

(e) Dr. Norton thanked the Board for their patience during his many absences while serving as President of the APHA October, 1962 - November, 1963. He also reported that the Royal Society of Health of Great Britain had made him an Honorary Fellow and that a plaque and scroll were presented to him in Kansas City by the President of the Royal Society, Dr. Andrew Semple, who happens to be the Queen's physician!

(f) It is urgent that all become better informed on current problems bearing on health, automation, racial and nationalistic unrest, health and welfare proposals in the National Congress, the shorter work week, and unemployment since many of these have a bearing on health problems. Attention was invited to the five releases by Governor Sanford on FIRST PROBLEMS FOR SIXTY-FOUR: POVERTY, which were distributed. Both the Governor and President Johnson are emphasizing their support of the "war on poverty."

(g) Again, Dr. Norton commented that he felt very strongly that the Board through the staff is justified in not giving approval to Nursing Homes unless the Board is definitely satisfied that people will be safe from fire and other hazards. We should maintain strict evaluation standards, even while recognizing that nursing home facilities constitute one of our most serious shortages.

(h) Dr. Norton also commented on the crippling and killing on the highways. He said that he had asked Commissioner Ed Scheidt to send to the local health directors his list now provided city police or county sheriffs showing revocations, suspensions and reinstatements of driver licenses. Some may wish to post these on their bulletin boards. In many cases these first two groups, illegally, continue to drive. Anything that the health departments can do to cut down on traffic crippling and killing should be done.

A report was given to the Board concerning several staff members who had undergone hospital experiences. Dr. Foard is now back home and getting along well; so are Dr. Higgins and Miss Simmons.

It was suggested by Dr. Dawsey and seconded by Dr. Goodwin that by common agreement Board members be given the opportunity to make a contribution so that they might have a part in the gift made to two funds in the name of the State Board of Health honoring Dr. Charles Richard Bugg since the family requested no flowers—and in lieu thereof suggested the two following funds:—The Virginia Sylvester Bugg Fund and the Hilltop Home for Retarded Children Fund.

Dr. Edwin S. Preston, Public Relations Officer, reported on the progress in public health activities during the year 1963. He cited a number of highlights of progress and accomplishments in the health program promoted by the various divisions and their sections. He also reminded the Board of the honor bestowed on Dr. Norton during the year when he was commissioned to evaluate schools of public health in certain South American countries and Puerto Rico and was elected to serve as President of the American Public Health Association. During the visit to Brazil, Peru and Panama, he was made an Honorary Fellow of the Public Health Association of Peru.

At the conclusion of this summary of progress, Mr. Redfearn commended the entire staff for the good work done by them during the past year.

The meeting adjourned at 4:00 p.m.

May 6, 1964. The annual meeting of the North Carolina State Board of Health was held during the annual meeting of the Medical Society of the State of North Carolina in the Greensboro Coliseum, Rooms 1 and 2, Wednesday, May 6, 1964, 8:00 a.m. to 9:15 a.m. Dr. Lenox D. Baker, President of the Board, presided.

Attending: Lenox D. Baker, M.D.; John R. Bender, M.D.; Ben W. Dawsey, D.V.M.; Glenn L. Hooper, D.D.S.; Oscar S. Goodwin, M.D.; D. T. Redfearn, B.S.; James Raper, M.D.; Samuel G. Koonce, Ph.G.; John S. Rhodes, M.D.

In addition to the Board members, staff members present included:—Dr. J. W. R. Norton; Dr. Jacob Koomen, Jr.; Dr. James Donnelly; Dr. Edwin S. Preston; Mr. J. M. Jarrett, and Mr. Gordon Poole. Dr. D. A. McLaurin and Mr. Joseph E. Barnes represented the Nursing Home Advisory Council. Mr. Charles Price of the GREENSBORO RECORD was present for the latter part of the meeting.

Dr. Baker gave the invocation. The minutes of the January 9, 1964 meeting were approved as circulated.

Dr. Jacob Koomen, Jr., Assistant State Health Director, presented some facts concerning the tentative "A" Budget now under consideration. Somewhat more than eight million dollars of State funds are being expended in this biennium. In order to maintain services at their present level, it is estimated that about \$680,000 additional will be needed in twelve program items. Later the "B" Budget, set up specifically for embarking on new



programs will be considered. The "A" Budget will be forwarded to the Department of Administration shortly.

Dr. Koomen also gave a report on the present status of chemical tests for breath alcohol as they relate to the responsibility of the State Board of Health. He said that to date a week-long school for the instruction of operators had been held under the sponsorship of the Division of Community Colleges. A two-day school on maintenance of instruments was given at the same center. In order to train additional operators, two courses have been scheduled—the first to be given in Charlotte in May and the second in Wilson in June. It was pointed out that the State Board of Health has the responsibility of certification of operators and selection of instruments.

Dr. Baker said that several persons had mentioned to him that it should be emphasized that not all drunk drivers have caused accidents and that a man who is drunk is ill, just as ill as a man using a drug such as "Miltown."

Dr. Koomen's reports were received as information.

In view of the fact that there are several advisory committees to the State Board of Health and staff, Dr. Hooper moved and Dr. Dawsey seconded that the President appoint a committee of the Board to clarify relationships and serve as liaison with advisory committees. The motion passed. President Baker appointed Mr. Koonce, Dr. Goodwin, and Dr. Rhodes, Chairman.

Mr. J. M. Jarrett, Director of the Division of Sanitary Engineering, presented the standards for construction and operation of swimming pools which now are available for the first time. These have been worked out in consultation with many organizations and agencies interested, including the hotel, motel and recreation associations. A motion for their approval was made by Dr. Dawsey, seconded by Dr. Bender, and passed.

Mr. Jarrett presented revised Dormitory Score Sheets and explained their need. A motion was moved by Dr. Dawsey, seconded by Dr. Rhodes, and approved as presented.

Mr. Jarrett recommended the creation of the Taylortown Sanitary District in Moore County and indicated that all legal requirements had been met. Upon motion made by Dr. Dawsey, seconded by Dr. Goodwin, the creation was approved.

Dr. Koomen gave a progress report on poliomyelitis vaccines. To date more than 2.7 million North Carolinians have received Sabin Oral Poliomyelitis vaccine in campaigns conducted in 80 counties. Another 12 or 13 counties plan to embark on such immunization programs in the fall. This should virtually eradicate poliomyelitis from the State. Progress in control of this disease has been spectacular with a reduction of from 58,000 cases in 1952 to 433 in 1963 for the United States, and a reduction in North Carolina from 2,516 in 1948 to 7 in 1963. Of the latter group, only three cases showed paralysis and only one patient died.

Dr. Norton thanked the Board for the privilege of going with the seven health directors from India who were in the United States on a Ford Foundation Grant. He said that they visited among other places Atlanta,

Washington, Baltimore, New York, Ann Arbor, Battle Creek, University of Missouri and Missouri Department of Agriculture, University of Oklahoma, Los Angeles, San Francisco, and Berkeley.

Dr. Norton reported that Mr. Charles L. Harper, Director of the Division of Administrative Services, had resigned effective May 15, 1964, to accept a place as Associate Director of Administration for the Department of Public Health, District of Columbia, Washington, D. C., at an increase of \$5,000 in salary. He stated that the State Board of Health has great difficulty in keeping competent workers because we are not competitive with many other states and cities in the matter of salary. "Mr. Harper is one of the best trained men in his field in the nation and we could not keep him. We have lost other good men for this same reason."

Dr. Norton stated that Dr. Higgins had been out because of illness and is now back after having made a good recovery. He also stated that Dr. Foard had been out because of health reasons and is now back on the job.

Referring to the loss of trained personnel, Dr. Hooper said the Board ought not to sit by and see these good men taken away. Dr. Norton told what had been done in presenting these matters to the Personnel Department. Dr. Baker asked for some specific mention of vacancies in the professional staff. Dr. Donnelly said he had three in his Division where the money available was Federal money and other states could offer \$6,000 more a year than authorized by the State Personnel Department here. He indicated that he has had assurance that there will be a re-study of the situation.

Dr. Norton gave a report on "Smoking and Health," the report of a committee to the U. S. Public Health Service Surgeon General. He said that he and Dr. Koomen have been called on to speak on this matter. He commented on the need for further research on tobacco from seed selection to include additives and to final processing into smoking material and also on the individual reactions and habits of smokers. He commented that he felt enough is now known to urge against smoking by teenagers, against inhaling, and for abstinence by those unable to practice moderation.

Board members indicated that there were other air pollutants such as automobile smoke, industrial fumes and dusts, and so forth, that could be possible causes of cancer. Dr. Baker stated that a much greater sum should be spent on such matters as prevention and early diagnosis and treatment of cancer of the breast and cancer of the uterus.

The meeting was adjourned to the auditorium for the Conjoint Session.

## TOWARD HIGHWAY SAFETY

LENOX D. BAKER, M.D.

DURHAM

On previous occasions when Dr. Norton has suggested that I deliver an address before the Conjoint Meeting on Highway Accident Control, I asked to be excused. In December when he again asked me to do so, I thought the matter would have been settled by the following letter:

Dear Roy:

Thank you for asking us to speak before the Conjoint Session in Asheville on highway accidents. As you know, we begged off this privilege last year. To be frank, I cannot generate any enthusiasm about discussions of the problem, am not convinced that such discussions are of benefit, and do not go along with an educational program idea. Therefore, I should not be the one to do the job.

For what they might be worth, my reactions to the highway accident problem are as follows:

1. Have a rigid inspection program and get the jalopies off the highways.
2. Clear the highways of all trucks loaded in excess of what they can keep moving at a steady rate on hills and otherwise.
3. Stop giving drivers' licenses to morons.
4. Get all distracting lights well away from the highways, particularly those whose beams interfere with highway signs at night, and doubly so when the highways are wet and reflect the lights and signs.
5. Allow no highway commercial signs other than those parallel with the highway.
6. Get tough in regard to drivers' licenses.
7. Let all traffic violations carry a suspension of driver's license for a number of days equal to the dollar total of the fine levied. Let the suspension not only include the driver but the involved vehicle as well. In many instances this will mean cancelling drivers' licenses, if necessary, permanently.
8. Cut down on the number of access roads.
9. Add widening lanes to channel all turn-off traffic out of the main flow at least 100 yards before reaching a turn-off.
10. Convert many of the present STOP signs into YIELD signs, which can be done easily where lanes are provided for turn-offs. (This alone could in the main, relieve us of the overplayed, dramatized whiplash comedy of errors.)
11. Inform someone in the Traffic Department that approximately 5 percent of all males are color-blind, and make it mandatory that all green GO lights are aquamarine with no yellow.
12. Acquaint some of the professional workers in the safety program with the fact that yellow attracts attention quicker than any other color. (With this a known fact, the safety people are changing former yellow and black STOP signs to red and white. A color-blind driver does not necessarily see the red sign.)
13. Allow no commercial signs along the highway to use any color, particularly in lighted signs, that is used for traffic signals.

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Read before the Conjoint Session, Medical Society of the State of North Carolina and the North Carolina State Board of Health, Asheville, May 8, 1963.

From the Division of Orthopedic Surgery, Duke University Medical Center, Durham, North Carolina.

You probably think, well, he's written a paper. But this is a "get tough" approach, and no one would like it and it would only meet criticism.

It should be pointed out that if an automobile will travel 100 miles an hour, someone, as long as his gonads are functioning, will drive it that fast. Unfortunately when I reached 50 years of age I found that I had dropped down to 50 miles an hour. Now that I have reached 60 I find that I am driving about 40 miles an hour. Presumably I shall continue to deduct one mile per hour for each year of age and eventually shall be going about 25 miles an hour and shall be causing more accidents than we have doctors to treat the patients.

Which reminds me, the man driving too slowly is a more reckless driver than the man driving too rapidly; so treat them alike and fine one just as quickly as you fine the other. These slow drivers fall in the category of accident-causers as much as the drivers described as follows: "I don't mind the urban drivers; I can even cope with the suburban drivers. But oh, those bourbon drivers!"

Someone else described one of the major traffic hazards as follows: "Driving with one hand, heading down a church aisle. The question is, will he walk or will he be carried?"

Please pardon the long harangue but I wanted to get the subject off my chest. Also, I enjoy discussing such matters with you as you always straighten out any errors.

As ever yours,  
(Signed) Lenox

As a result of the above letter, Roy came to the office and said that since a paper had been written, why not read it. He handed the letter back and asked that it be expanded a bit. I was reluctant to do so as the letter took a negative approach and was too critical. Nevertheless, I am most appreciative of the privilege of addressing a Conjoint Meeting of the Medical Society and the Board of Health of the State of North Carolina. It was not until after I got into the mess that that still little voice asked me, What is highway safety? What is it all about anyway? When this happens, you stop to think—and you are lost.

### Are Highway Safety Programs Feasible?

Highway safety—certainly the words have a fine, almost fervid ring that invokes pictures of the grim reaper hovering around every curve and corner, distraught patrolmen ready to pounce, pompous safety directors, and apprehensive mothers, all working like angry farmers tearing weeds out of gardens and flinging them on to a trash pile.

There are other less dramatic but equally important implications in the program. In the first place, when we urge our profession and those working with us to embark on a program of highway safety, we imply that we either already know how to do it and what the problem is, or that we can learn in a reasonably short period of time. Secondly, we imply—and indeed it has become fashionable to say implicitly—that highway safety is not only a possible but a feasible goal. By feasible we mean we can do it with finances and approaches which lie more or less readily at hand. Thirdly, we imply that we know enough about what we are doing to be at least reasonably sure that our efforts will not have unexpected side

effects, with the incidental eradication of good as well as correction of evil—such as wide, one-way boulevards encouraging more speed; safety belts giving a false feeling of security; wider brake bands and more tire traction surface, telling us, **Faster, faster—we will save you.** Finally, the constant emphasis by Madison Avenue public relations approaches may give us the feeling that after the last project has been completed and the PR man has presented his bill, we shall have a nice neat formula that will just loft us through life with safety for all and the least possible effort on our part. Of course, none of this is true, but some people, in thinking of highway safety, imply that it is possible. Indeed, most of the arguments put forward for adopting safety programs have been based on such concepts. I do not intend to take the negative approach, since it is hard to prove a negative proposition in this age in which so many unproved safety miracles are being described.

### **The Futility of Fear Propaganda**

As we discuss the problem, we should remember that all doctors should have, as their major concern, the good health of their patients and the public. Therefore, the highway safety program is of major concern to our profession.

This does not mean that we should approach the matter according to some stereotyped formula. For many years, the public has been bombarded with fear propaganda and highway toll statistics. Within the past ten days the Associated Press released statistics for the month of March, 1963. Many of us probably read them. I doubt that there is a man in this audience who could quote the figures with any degree of accuracy. In spite of the fear campaign and the frequent repetition of astronomical figures, little or nothing has been accomplished, and in my opinion such efforts will continue to be fruitless. Man simply will not accept the fact that what happens to somebody else can happen to him, and the number of people killed on the highways in California, especially on the Los Angeles Freeway, is of little real concern to any of us.

In the midst of all this ineffective publicity, the truth as to the causes of accidents is hard to ascertain. Basically, one of the main causes undoubtedly is human error, due to many factors in man's makeup—irresponsibility, day-dreaming, fatigue, slow reactions, native stupidity, inexperience, inability to judge speed and distance, and the too frequent mixing of the highway boilermaker cocktail—whisky chased by gasoline.

Propaganda is not likely to affect any of these human factors; rigidly enforced rules in regard to driver's license—which gives one a privilege and not a right—can partly control them.

Other factors are the speed and the fascination of the modern automobile which almost invite you to challenge the speedometer. The third villain is the inadequately constructed and engineered highways and crossroads. This is particularly true in our cities where almost every corner is a blind one.

Publicizing the fact that the U. S. motorists set a new record for highway slaughters in 1962—41,000 dead—will not eliminate any of these

major contributors to our death rate, and the fact that the year's death toll was greater than the number of Americans killed in action in the American Revolution, the War of 1812, the Spanish-American War, and the Korean War put together, produces only boring table conversation. If you are interested in more recent statistics, during the month of March, 1963, 3120 lives were lost on the highways, making a total of 8,460 for the first quarter of 1963. In addition, 300,000 people were injured sufficiently to be disabled beyond the day of the accident.

### Medicine's Field of Responsibility

But I am not here to discuss statistics, and I doubt that it is the medical profession's responsibility to be concerned with such reports nor with the speed of the automobile nor with the construction of highways. If members of society are to make any contributions toward either cutting down on the number of accidents or lessening the mortality and morbidity resulting from them, we each should stay in our own field, tend to our own knitting, and make our contributions as best we can. If medicine agrees on such an approach, our duties will be confined to proper organization of our personnel, equipment, and services in our hospital emergency rooms to render the best possible care to any and all victims brought to us from the highways.

The American College of Surgeons has long had a great interest in this phase of the problem. Just how each hospital, community, or county is to prepare for the handling of accident victims will have to depend entirely on the facilities and personnel available. The American College of Surgeons has outlined adequate programs and organized to meet the needs according to the circumstances. In the light of new knowledge and experience, the details for each program and the recommendations are constantly being changed. At the moment it appears that the most practical approach to the problem is a cartwheel-like organization, with the large teaching hospital as the axis and the other institutions in each area located about the periphery. This arrangement allows the small, wayside, one-man clinic to have access to community services nearby to which the physician may refer those cases beyond his control, and likewise each hospital along the way to have means of communicating with each of the larger institutions according to need, and methods of quick referral involving a minimum of red tape.

At each station it is felt that the team approach, with everyone knowing his duties, is the best approach. Such organization tends to break down rapidly. It requires leadership. Whether medicine has the interest, the know-how, and the leadership to keep such a program going might be questioned. Certainly we can't do it alone. But if each of us will contribute according to our abilities, will be willing to serve on committees, and attend staff conferences for discussion of the various cases that have been seen each month, undoubtedly we can improve our part of the battle against the highway toll. In this approach I believe medicine has been doing and is willing to do its job, never perfectly but certainly willingly.

## Interest in Other Fields

### The courts

Perhaps it behooves us to be self-critical and to learn our own lines and speak them well. Nevertheless, in the overall show, perhaps we should keep an eye and ear directed somewhat to other fields. When members of the General Assembly argue against air surveillance for control of speed because the public doesn't like to get caught in that fashion, when they think the whammy should be discontinued because it is sneaky, and when they question the use of unmarked automobiles for highway patrolling, we might question whether they are not putting their constituents' wishes on a more important pedestal than they are their constituents' lives.

The Metro Police in Dade County, Florida, using 30 unmarked squad cars, halted 100 violators in one eight-hour period. In the same county, of 131 adults killed in automobile accidents in greater Miami in 1962, 43 percent had been drinking. But even more revealing, of the pedestrians injured in traffic accidents, 70 percent had been drinking. This was not an unusual finding. A similar study conducted over a period of six years showed that 58.6 percent of 768 fatal victims tested had been drinking. The figures included no children and only adults brought in within 24 hours after the accident.

Now where did the police, or perhaps we should say, where did the courts, come into the picture? Of the 131 fatal accidents, there were only 17 instances of drinking listed by the police as a contributing circumstance. Actual charges of driving while intoxicated were made against only 10 drivers. Only 3 pedestrians were officially listed as drinking. So perhaps our courts also have responsibilities. But it is not our business to criticize the police nor the courts. Nevertheless, as citizens we should keep looking.

Whether something should be done concerning the speed of our present day cars is another matter in need of consideration, but not at this time.

### Highway engineering

The last factor has to do with the safety of the highways themselves, and as a driver of an automobile who is constantly attending clinics and meetings in this state, I have one suggestion for each of you. On the road which you use most frequently, count the engineering errors and the needs for better construction over any mile or 5 miles you might travel routinely.

Going and coming from our house to the hospital where I work, a distance of 5 miles, one can count 62 needed corrections that would make that 5-mile strip of road safer on which to drive, and this road is not old in the true sense of the word. What are some of these errors? Blind corners, blind curves, blind hills, incorrectly banked curves, not a single strip of road for safe passing in the entire 5 miles. There is a double curve in this 5-mile stretch that has a blind street coming in at a 75 degree angle. Both corners are blind, both curves are banked the wrong way, and both have too great an angle for safe driving at a moderate speed—that is, a speed within the limit shown on the highway markers. Fifty-one accidents have occurred on this double curve.

Now what has our Highway Department done to correct this matter?

Not one thing. The only correction in the way of protection that has occurred was made by an electric power company. These accidents have resulted in innumerable property damage to one of their power poles. Did they move the pole? No. Did they paint it a bright yellow? No. To protect their property they surrounded the main pole with other poles that stand about 6 feet out of the ground. Incidentally, these 51 accidents have led to innumerable hospitalizations, fractures, head injuries, amputations, paraplegia, hemiplegia, cerebral damage, and 3 deaths.

### Summary and Conclusion

Maybe some of us could contribute something to the program if we were willing to serve on our Board of County Commissioners and on other bodies interested in the welfare of our citizens. This slaughter will not be stopped by publicity and propaganda nor boring statistics such as I have quoted. I believe it can be said categorically that the slaughter will not be stopped. There is a possibility of lessening the damage by better law enforcement, better highway construction, and possibly by some control of the speed of the automobiles being manufactured, and, again back to our own cooking, by well organized trauma teams in our medical facilities. The latter is our job.

As stated at the beginning of this paper, I was reluctant to write it, as it is critical and will probably not meet with the approval of many of the powers that be. So why did I write it? Perhaps Dean Alfange answers that question for you:

I do not choose to be a common man. It is my right to be uncommon if I can. I seek opportunity—not security. I do not wish to be a kept citizen, humbled and dulled by having the State look after me. I want to take the calculated risk; to dream and to build, to fail and to succeed. I refuse to barter incentive for a dole. I prefer the challenges of life to the guaranteed existence; the thrill of fulfillment to the stale calm of Utopia. I will not trade freedom for beneficence nor my dignity for a handout. It is my heritage to think and act for myself, and enjoy the benefit of my creations, and to face the world boldly and say, this I have done. All this is what it should mean to be an American.

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## **PUBLIC HEALTH IN NORTH CAROLINA— A SIXTEEN YEAR PROGRESS REPORT \***

By J. W. R. NORTON, M.D., F.A.C.P., F.R.S.H. (Hon.)\*\*  
Raleigh, North Carolina

Six years ago a ten year (1948-1958) report was made before this Conjoint Session.\*\*\* In addition to the detailed annual reports regularly provided it also appears appropriate occasionally to get a satellite view in order to see not only the present activities but also at least the immediate past and the probable next steps. A weather forecaster or quarterback must see the present situation as one in a series. A good coach is helped in planning future strategy and tactics by re-runs of past plays.

In our efforts to prevent or correct disability and prolong happy and useful life, medical and assisting personnel exert important, but not the only, influences on human beings which are organisms of the utmost complexity.

It is easy to overlook the extent to which health maintenance and promotion are responsibilities shared with others by medical and other health professionals. No single group accepts full responsibility for the five hundred per cent or greater variations in maternal or infant mortality between segments of our population. We must accept heredity as we find it. From a community standpoint, even the internal and external environment, such as that determined by previous associations, food habits, education, deprivation or over-indulgence, and many other factors are, when considered alone, influenced only slowly by vaccines, drugs, radiation or surgery. The responsibility for health, or the lack of it, is a many splintered thing.

Physicians and dentists are better trained and equipped today and are more deserving of generous understanding and support than ever before—and the same is true for public health personnel. Some of the possible reasons why one has not been followed increasingly by the other seem worthy of mention in this sixteen year resumé. We have sometimes over-emphasized medical progress and over-publicized procedures which are still in the experimental stages. Some people consider us magicians and that the little effort needed to apply the magic is overpaid. We know, but often fail to mention, the shortages, but others see them and say we are lacking in medical leadership. By shielding those few committing disreputable acts the entire medical profession loses public confidence. A few in private medical practice alienate those of the medical profession who serve in supporting work and lead the latter to become "outsiders." Public Health leadership should not be limited to sanitation and health education work toward communicable disease control among the indigent only. Medical care and public health efforts should be coordinated against disability and postponable death.

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\*\* Secretary-Treasurer and State Health Director, N. C. State Board of Health, Raleigh.

\*\*\* N. C. Medical Journal, Vol. 19, No. 6, PP. 222-229, June, 1958.

**Modern Changes Affect Health**—Health has been affected by the impact of many modern changes. Higher family income, increased tourists, more and better diversified industry, mechanization of farming, better schools and colleges, extension of rural electricity and telephones, more diversification on farms (particularly livestock and poultry), more food processing and preservation, and better communication media and improved highways—all these and more have improved health and vice versa! Better housing, libraries and recreation facilities have helped. More directly assisting, and more often thought of, are our three medical schools, dental school, excellent nursing schools, School of Public Health, and training facilities in engineering and in community organization and government. We now have many more persons well trained in the 150-odd health service categories.

Among the general changes in public health over this sixteen-year span, a few may be mentioned:

1. Reorganization of the central State staff from fourteen to seven divisions including about forty sections (1950). A limitation to 67 was also made in the local administrative units serving all the cities and counties. For each local unit better housing and equipment, as well as personnel and budget, were provided.
2. Recodification and revision of public health laws (1957) and also periodic improvement in State and local health regulations.
3. Increased services to other State and local official agencies, and co-ordination with voluntary agencies in health matters to avoid duplication of personnel and unnecessary tax costs.

### DIRECT FUNCTIONS

A few programs of the State Board of Health are direct functions of the office of State Health Director. Some are placed there by law, others, usually temporarily, because they involve the work of several or all divisions. Important among these, presently handled by the Assistant State Health Director, Dr. Jacob Koomen, Jr., are administration of the medical examiner system, breath alcohol testing program, and coordination of emergency health preparedness activities.

**Medical Examiner System**—Establishment of a county medical examiner system was made possible with passage of enabling legislation in 1955. The Committee on Postmortem Medicolegal Examination is charged with general administration of the system. At the present time, six counties, (Caswell, Davidson, Forsyth, Guilford, Transylvania, and Wake), take advantage of the law to improve investigation of unexplained and violent deaths. Toxicological services so necessary to a successful program are supplied by the Medical School of the University of North Carolina.

**Blood Alcohol**—Under legislation enacted in 1963, the State Board of Health is responsible for selecting types of apparatus and certification of operators in a new program using chemical tests of breath to determine level of blood alcohol. Through combined efforts of the State Highway Patrol, Institute of Government, Division of Community Colleges and the Board, instruments have been chosen, appropriate regulations prepared, and one week courses have been given to those proposed for the testing operations of this important scientific aid to law enforcement to protest

the innocent and decrease highway crippling and killing in several of the State's communities.

**Health Mobilization**—Public health activities in civil preparedness to meet health needs of the nation in the event of a national disaster have been defined and redefined as the international situation changes. To coordinate the civil defense health responsibilities assigned to the Department of Health, Education and Welfare, a Division of Health Mobilization was established by the Surgeon General of the Public Health Service on May 1, 1959. The basic assignment given to the Public Health Service was to anticipate and determine the medical and health needs of the nation in time of an emergency and to develop operational programs to assure that these needs would be met.

The North Carolina State Board of Health has cooperated with the State Civil Defense Agency and the Medical Society of the State of North Carolina in activities relating to total emergency health preparedness as well as those defined in its civil defense delegation of Emergency Health Protection. With the recent assignment of full-time personnel and on the recommendations of the Executive Council of the State Medical Society, responsibilities for the prepositioning, training and planned utilization of the Civil Defense Emergency Hospitals and the Medical Self-Help Training Programs are being assumed.

## I. ADMINISTRATIVE SERVICES

**Organizing to Meet Changing Needs**—The complexities of conducting a multi-million dollar enterprise with its multiplicity of programs led to the establishment of the Division of Administrative Services in the late nineteen fifties. All of the business management, personnel, and related administrative work were placed under the supervision of this unit. Subsequent refinements have been made in various functions is keeping with modern concepts and techniques in budgeting, accounting, filing, inventory control, film and library services, printing and other administrative procedures.

**Budget—Personnel**—The period from 1948 to 1964 has been one of needed annual growth and development in the programs and activities of the State Board of Health. Budget increases reflect those program changes as follows:

1. Local appropriations for public health increased from \$2,125,385 to \$7,610,795—an increase of 258 per cent.
2. State Appropriations increased from \$862,264 to \$4,104,011—an increase of 376 per cent.
3. Federal health grants to North Carolina increased from \$1,681,958 to \$3,490,820—an increase of 108 per cent.
4. There was a combined, Local-State-Federal increase in public health appropriations for North Carolina from \$4,669,607 to \$15,205,626—an increase of 226 per cent.
5. Payments to hospitals, and to private physicians and assisting personnel increased from \$371,177 to \$1,856,665 or 400 per cent.

Another significant index of growth, in addition to the budgets, is the increase in the number of health employees required to carry out agency

programs during this period. The State Board of Health had 246 employees in 1948 and in 1963, had 407—an increase of 65 per cent, indicating increased program responsibility and higher specialization. There was also a significant increase in local health department employees from 878 to 1,325—an increase of 54 per cent. Since a large share of expenditures for State staff is for scarce and specialized personnel, made available to local health departments on a consulting basis, it is impossible to allocate this separation accurately. We have, however, decentralized insofar as practicable the responsibility, personnel, and budget, and we have meticulously avoided top-heaviness.

**Public Relations**—Recognizing the need for keeping the public informed and of maintaining an awareness of public opinion, the State Board of Health has fostered an active public information program. A monthly **HEALTH BULLETIN**, published since April 1886 and edited by the Public Relations Officer since 1960, has a mailing list of almost 50,000. For the past three years, a bi-weekly employee **NEWSLETTER** has been produced as a means of circulating information to the staff and maintaining high esprit de corps. In addition to maintaining an active relationship with all public news media, this office has been helpful in liaison work with the legislature, in the editing of departmental reports, and in other essential activities.

**Film Library**—The responsibility for operating a health education film lending service, has evolved from a relatively small operation sixteen years ago to the largest public health film library in the country—and we are still unable to comply with some of the requests for this service. The staff has increased from one part-time employee to a supervisor and seven employees—film distribution from 7,939 to 30,682 annually, and film purchases from \$6,900 to \$22,330 annually.

**Public Health Library**—A generous grant of \$40,000 from the Zachary Smith Reynolds Foundation helped to establish a departmental library in 1954. Library resources have grown steadily through support from State appropriations. At the present time, the library lends approximately 6,500 books and periodicals annually.

## II. EPIDEMIOLOGY

**Communicable Disease Control**—No case of smallpox has been reported in the State since 1957, nor has there been an indigenous case of malaria since that time. As an example of food-borne and water-borne disease, typhoid fever cases have declined from 56 in 1948 to 24 in 1963. Diphtheria accounted for only four cases in 1963, whereas 485 cases were reported in 1948.

A decline of 81% in deaths due to tuberculosis has been noted during the period. We had 3,577 tuberculosis deaths in 1916, our highest report, and 176 in 1963. Over three and one-half million persons have had chest Xrays under the Board's mass program for the detection of tuberculosis.

The progress made in venereal disease control in the late 1940's resulted in an orderly decline of the incidence of venereal disease and a seemingly

logical reduction in some areas of activity. Infectious syphilis reached a low of 192 cases in 1957. Optimism for the control of venereal diseases was premature, however, for alarming increases soon became apparent in both North Carolina and the nation. This trend is now slowly being reversed through an accelerated and intensified program. There is increasing effort and optimism for the development of a vaccine against syphilis.

**Veterinary Public Health**—This Section was established in 1951. That year a State-wide program was launched to control rabies in animals. As a result of these activities, North Carolina became free of rabies in domestic animals in 1961 and the number of human antirabic treatments have been drastically reduced. Other diseases of animals transmissible to man are investigated and control measures are instituted where practical. In 1961 the Section played a leading role in obtaining passage by the General Assembly of a State-wide compulsory meat and poultry inspection law to be administered by the State Department of Agriculture.

**Accident Prevention**—In 1959 this Section received a State appropriation for the first time, and its full-time professional worker has participated in programs such as poison control centers, home and farm and highway safety workshops, seat belt promotion, activities of the North Carolina Rural Safety Council, and stimulating local staff interest. Home and farm fatal injuries were 700 in 1953, the first year codification permitted statistical separation, and 784 in 1963. Motor vehicle injury deaths were 827 in 1948 and 1,400 in 1963. The National Safety Council estimates 137 additional cases of serious injury to each home and farm accidental death and 37 serious injuries to each motor vehicle death.

**Immunization Programs**—Following participation in the Salk poliomyelitis vaccine field trials in 1954 and the vaccination programs under National Foundation sponsorship (1955) and Federal sponsorship (1955-1959), the Board initiated a State-wide vaccination program which has met with considerable success. Local health department staffs have also assisted county medical societies in their recent mass immunization programs using Sabin Vaccine. In 1959 North Carolina became the first state in the nation to enact a law requiring compulsory vaccination against poliomyelitis. In 1963 the Immunization Activity Program was established to assist local health departments in improving and maintaining effective immunization levels against diphtheria, smallpox, typhoid, pertussis, tetanus, measles and poliomyelitis. These activities are being aided by a special Federal project grant.

**Public Health Statistics**—This Section is responsible for the registration and certification of births, deaths, marriages, and divorces. It renders statistical and/or data processing services to fifteen different health project programs as well as to various committees of the State Medical Society and to other health agencies. Morbidity reports are also collected, compiled, analyzed and published.

**Occupational Health**—The industrial progress of North Carolina has increased demands for consultation and assistance in the control of industrial occupational disease hazards. The Section offers these services to

industry through its staff composed of a physician, engineers, physicists, an electronics specialist, and X-ray technicians. The increased staff and educational opportunities have permitted the provision of engineering and medical evaluation of industrial exposure to many new chemical compounds as well as to exposure to physical hazards such as excessive noise, light, heat and radiation. Continuing engineering efforts toward control of hazardous exposure of employees to toxic dusts and early medical detection of silicosis and asbestosis cases by annual X-ray examinations have been followed by a marked decrease in these disabling and incurable diseases in the dusty trades. To stimulate public awareness of the value of healthful work environments, the staff promotes, and participates in, the activities of conferences, councils, and advisory committees directed toward this effort.

**Radiation Protection**—The Board has statutory responsibility for the development of a State-wide Radiation Protection Program. Regulations for comprehensive radiation protection are now approved by the State Board of Health and the Governor. The Board will perform licensing and inspection of radiation sources in this State—a function now partially done by the Atomic Energy Commission. This activity of the AEC will be passed to North Carolina by an agreement between the Governor and the Atomic Energy Commission. Protection of the public against excessive exposure to ionizing radiation by continuing surveillance over environmental and occupational sources requires competent physicists, physicians, engineers, and chemists.

### III. LABORATORY

New problems as well as golden opportunities have developed for the laboratory in this sixteen-year period. In 1960 the second Director since 1908, Dr. John H. Hamilton, retired after twenty-four years of distinguished service.

**Chemistry**—The laboratory has developed competence in radiological chemistry, in the examination of drinking water for toxic elements and compounds, and also in the area of air pollution. This Section has expanded from 1 chemist and 2 technicians to 7 chemists, 4 technicians and 1 typist.

**Cytology**—The number of Papanicolaou examinations performed has increased from 642 in 1949, the first full year of operation, to 53,341 examinations in 1963. In spite of the fact that this service is limited to State supported Cancer Detection and Diagnostic Clinics and to indigent patients of private physicians, the number of specimens received continues to increase.

**Water**—Analyses of drinking water have increased 52 per cent since 1948 when there were 9,075 tests as compared to 17,513 in 1963.

**Infectious Diseases**—Many new tests were added to the bacterial and viral activities. Included in these tests were:—anti-streptolysin O titer testing of blood, C reactive protein; complement fixation tests for viral

and rickettsial diseases; typing of salmonella and shigella, leptospira agglutination, and viral isolations and identifications.

Additional tests now being performed include:—Kolmer Reiter protein determination and fluorescent treponemal antibody tests in syphilis serology; fluorescent antibody tests for identification of beta hemolytic streptococci of group A; and fluorescent antibody technique in rabies identification. During 1963 a grant from the United States Public Health Service made it possible for all specimens submitted for tuberculosis examination to be cultured and acid-fast organisms identified.

**Certification**—Inspection of milk laboratories making examinations of milk used for interstate shipment was inaugurated in 1954 and thirty-two (32) have been certified. In 1962 certification of water plant laboratories, examining water used on common carriers engaged in interstate traffic was begun and nine have been certified. The approval of serology laboratories for the performance of premarital tests for syphilis under the North Carolina Marriage Law was begun in 1939 and at the end of 1963 those approved had increased to 196. In 1963 the three approval and certification programs were combined as an Approval and Certification Unit.

**Biological Products**—Advances in the commercial manufacture of biological materials made it possible to buy these products under state contract much more cheaply than we could produce them. The animal farm is still maintained to produce the small animals and blood needed for our laboratory use, and blood for several other nearby laboratories. In 1963 the prices asked for specimen outfits and biologicals had to be increased in order to bring the price charged in line with our costs.

#### IV. LOCAL HEALTH ADMINISTRATION

**Aid to Counties**—Direct State aid to counties sixteen years ago amounted to \$350,000, half of which was earmarked for venereal disease control in seventeen counties. The 1949 General Assembly increased State aid to counties by \$800,000, and in July of that year the last four of our one hundred counties began local health department services. This year (fiscal 1964) the local health service budget was \$9,338,059, with 81.5 per cent coming from local sources. During the sixteen-year period local support has increased 258 per cent, and State aid has increased 336 per cent, with the major advance in 1949. During this same period federal funds for local health departments have decreased 65 per cent, partly because of greater insistence by the federal government on use of categorical specialists. Increased local health services, personnel, and salaries have been borne largely by increased local funds during the past seven bienniums.

**Health Education**—Health education has been emphasized as services have shifted more and more from those for people to services requiring the understanding and participation of people—individually, as families, and as communities.

**Health of School-Age Children**—The School Health Coordinating Service was strengthened in 1949 by a yearly appropriation to the Education De-

partment of \$550,000—reduced since 1955 to \$425,000 annually. The State Board of Health has provided personnel services for the finding and correction of defects among children least able to pay and this service has stimulated similar action among those who pay their own bills. This section was transferred from the Local Health Division to Personal Health, July 1, 1961 in order to have it under a pediatrician.

**Public Health Nursing**—Public Health nursing has been strengthened with regard to training and salaries, and the number of nurses has increased from 380 in local health departments and seven on the State staff in 1948 to 563 generalized nurses, 39 special project nurses, a total of 602 local and to ten State in 1964. Local nurse supervisors have increased from 19 to 41. Specialized nursing consultation has developed from those in maternal and child health, planned parenthood, and occupational health in 1948, to include the pediatrics, heart disease, cancer, mental health, nursing homes, and crippled children's programs.

Changes in public health nursing during the past 16 years include:— (1) extension of public health nursing care to the chronically ill upon referrals by physicians; (2) inclusion of mental health concepts throughout all nursing services; (3) extension of school health services; (4) increased services in clinics and schools with more selective home visitation; (5) reduction in the nursing staff time assigned for communicable disease control but more for immunization to poliomyelitis, assistance in supervision of premature infants, rheumatic fever nursing services, more effective supervision of tuberculosis nursing, and better follow-up in obtaining speech and hearing and other defect correction.

**Fourteen Years Experience Operating Mental Health Clinics**—On July 1, 1949, the responsibility for community mental health services was transferred from the Hospitals Board of Control to the State Board of Health. There were seven poorly staffed clinics in six communities. Mental health services were developed in all local health departments utilizing the 80 physicians and more than 500 registered nurses working locally, as has been done effectively for many years in tuberculosis control. When the community Mental Health Program was transferred from the State Board of Health back to the State Department of Mental Health, effective July 1, 1963, there were 15 full-time clinics and 15 satellite services. The older clinics were well staffed and two had been approved as training centers by the American Association of Psychiatric Clinics for Children. A training program for mental health workers has been expanded through stipends to mental health students, but more spectacular has been the development of in-service training facilities. At the time of the transfer in 1963, two clinics provided training for all mental health disciplines, with three of these for clinical psychologists, and four for psychiatric social work students. Four clinics provided training for psychiatric residents from Duke University. Experimental projects included explorations in the use and functions of certain other personnel in mental health clinics—psychiatric nurse, mental health nurse consultant, health educator, and psychological aide.

The State Board of Health received national recognition for initiating



the two-week Pisgah View Community Mental Health Workshop which followed previous one-week staff conferences. The final plan was developed in 1957 and was continued in cooperation with the four State Mental Hospitals to motivate local health nurses to assist mental patients and their families to adjust properly prior to and following hospitalization. In order to provide some of the necessary methods and skills, we supported 405 nurses from the nineteen counties now participating for one and two weeks orientation courses at Dorothera Dix Hospital.

**Local Health Department Buildings**—In cooperation with the Medical Care Commission and through the use of federal funds, matched by local and State funds, amazing progress has been made in providing good working quarters for local health departments. Eighty-four health centers have been completed, and two are under construction.

### V. ORAL HYGIENE

The philosophy of the Division of Oral Hygiene has been that improved dental health could best be obtained through a program of dental health education which would motivate the individual to appreciate the need for good dental health and to accept personal responsibility for maintaining it. During this period, however, the Division faced a huge back-log of unmet dental needs accumulated during the war years and the immediate post-war period, due to the absence of civilian and public health dentists in the armed services. This accumulation of emergency-type dental needs made it necessary to place greater emphasis on the relief of pain and/or the removal of infection of dental origin instead of upon dental education and correction. The corrective dental services provided by staff dentists serve as a method of teaching through demonstration. During the last decade personnel increased and the focus began to shift again toward preventive services. The ratio of extractions to fillings over this sixteen-year span portrays this change in emphasis:—

	1948-'53	1953-'58	1958-'64
Average number of dentists .....	10.0	13.6	18.3
Number of extractions in ratio to one filling ....	2.03	1.50	0.87

**Research**—From 1958 to the present, the basic areas of dental research, private practice of dentistry, and public health dentistry were employed to provide opportunities for the people of North Carolina to enjoy aesthetic and functional dentition throughout their entire lives. Much effort has been spent in research on referral and follow-up programs, methods and uses of dental health education materials, and pre- and post-fluoridation studies.

**Fluoridation**—Fluoridation of community water supplies in North Carolina began in 1948 with Charlotte, the first city. Today there are forty-two water supplies serving forty-eight communities and a population of 1,219,564. Seventeen communities whose water supplies contain the optimum amount of fluoride occurring naturally, serve 35,800 people. This is a total of 1,255,364 who are now drinking fluoridated water and represents 69.7% of our urban population and 56% of our population served by central water supplies.

**Unmet Needs**—The needs yet unmet in this vital area can be seen by the fact that only about half the demands for dental public health programs are being met. Only half the one hundred counties in North Carolina received dental health programs in 1963-'64 by our twenty-three dentists. Based upon the population per dentist ratio, North Carolina, with about 1,400 dentists, (only about 100 of which are Negro) ranks forty-third in comparison with other states.

## VI. PERSONAL HEALTH

**Maternal and Child Health**—The responsibilities of this Section are to assure public health prenatal service and services to infants, preschool, and school children.

The planned parenthood services through local health departments started in March 1937, have been greatly improved by the recent availability of contraceptive pills and plastic intrauterine devices. Family planning is assisting the multi-handicapped families in overcoming the burdens of poverty, disability and ignorance.

During 1950 a premature care program was begun to demonstrate the value of quality care for infants born prematurely. The formal training program at Fayetteville was discontinued in 1960 and the training was shifted to the counties, due to the small number of remaining midwives.

In 1952 the first postgraduate course for physicians in premature care was begun with the Bowman Gray School of Medicine, and a teaching course for nurses in the care of premature infants was begun under the auspices of the training center at Duke Hospital. Bowman Gray is at present conducting a physician training course for some forty per year. Duke began a similar training course in 1953 and added a program for training of nurses. The University of North Carolina added their training course for nurses in 1961.

In 1954 a fetal and neonatal study was begun with the participation of the three medical schools as well as four other medical centers. Four years ago the study was limited to the three medical schools and an ongoing analysis of tabulations has continued. There have also been perinatal mortality tabulations for all the various hospitals throughout the State.

In 1956 maternal and child health nursing conferences were begun on a yearly basis and were continued until 1962. During this time, through the cooperation of Dr. Angus McBryde and the Medical Society, a study of perinatal mortality was begun and continued until 1963. At the stimulus of this Section a study was begun in Wake County of school age children prematurely born and a comprehensive evaluation was made and reported by Drs. Ellen Preston and Isa Grant. A further evaluation of the material is being pursued at present by Dr. Hal Robinson of the University of North Carolina.

**Services for Mentally Retarded**—In 1956 an orientation program for public health nurses and social workers in mental retardation was begun in cooperation with the staff of Caswell Center. In 1958-'60 four diagnostic and evaluation clinics for mentally retarded children were begun in Char-

lotte, Morganton, Oxford and Washington. During 1960-'62 the first full scale multidiscipline clinic for the evaluation of retarded children was established at Bowman Gray School of Medicine under the direction of Dr. Alanson Hinman, and a second clinic at the University of North Carolina under the direction of Dr. Harrie Chamberlain. By July 1964, three new full-scale district developmental evaluation clinics are to be developed in Asheville, Charlotte and Duke Medical School. Last year, under the stimulus of federal funds and a generous appropriation by our General Assembly, the Mental Retardation Unit was established, eventually to have a staff composed of a pediatrician with consultants in social work, nursing, psychology, and health education. It will be the function of this unit to coordinate all activities of the group in mental retardation. Associated with this is the development of the first twelve Pediatric Supervisory Clinics.

**Crippled Children**—Support funds in this program were first used only for clinic fees, hospitalization, and surgery services for the correction of orthopedic defects. We sponsor 46 orthopedic clinics, (28 in June 1948), 7 congenital heart and rheumatic fever clinics (started in 1952), 4 speech and hearing clinics (started in 1956). There are presently 2 clinics for the treatment of cystic fibrosis (started in 1963). There is a need to expand present speech and hearing services in collaboration with the development of the regional developmental evaluation clinics of the Maternal and Child Health Section. Attempts are being made to establish clinic services for convulsive disorders.

During 1963, 16,042 children were seen in crippled children clinics for 32,333 clinic visits with 1,986 hospitalizations for a total of 24,769 hospital days. Three thousand, nine hundred and eighty-six appliances and prostheses were purchased for 1,628 children. Two hundred sixty-six children had private office service through 1,291 visits with private physicians.

**Cancer**—The program now in its sixteenth year is operating in the following areas:—(1) Diagnosis: in twenty-two clinics approximately 12,000 patients are seen yearly, of whom 1½% have cancer, and another 1% have lesions to be followed in the clinics. Most of these 12,000 are found to have non-malignant disabilities for the care of which they return to the referring physician; (2) hospitalization (3 days) with about 1,000 admissions yearly for diagnosis (biopsy) and 50% interpreted as cancer; (3) hospitalization for treatment (surgical chiefly) runs about 750 patients per year. In addition a program of seminars and short courses on cancer diagnosis and treatment is provided for general practitioners throughout the State. Cytological diagnosis of cancer, chiefly cervical is carried out in the State Laboratory, which received 53,341 specimens in 1963.

**Heart**—The specific program in this field has been concerned first with equipment and support of heart clinics in the teaching centers and larger hospitals where diagnosis and teaching are carried on. Some clinic personnel and laboratory expenses on a temporary basis and short courses covering recent developments in this field have been provided for physicians. In 1962 and subsequently an extensive home care program for cardiac patients, chiefly stroke patients, with physical therapy and other rehabilita-

tion services being emphasized under adequate medical supervision, has been provided in eight counties—Caswell, Chatham, Greene, Halifax, Lee, Mecklenburg, Orange, and Warren.

**Chronic Diseases**—This large field, including aging disabilities, has come to the front in public health in North Carolina only recently. Previously programs for tuberculosis, hookworm, and venereal disease were handled as separate projects in control and many serious chronic disabilities were bypassed. Gradually as the communicable diseases were brought under control the need for public health attention to this field was exposed more obviously. Thirty counties, including the 8 with stroke programs, now have home care programs for chronic diseases, and their control measures are guided by private physicians.

Provision for assistance in diagnosis of diabetes has been made available for five years, following the pioneering work of many years in the Harnett County Health Department. Since 1959 there has also existed a State-wide project for home care of the chronically ill, with local health nurses guided by private physicians, but this extensive endeavor is only gradually being accepted as a standard public health program. As a demonstration rehabilitation project in thirty counties, there is provided in the home the medical, nursing, and physical therapy services that enable the disabled to be restored to the maximum to which each is capable in self-care and, in many cases, to return to useful work.

**Nursing Homes**—In March 1961 the General Assembly placed with the State Board of Health the licensing authority for nursing homes. In 1963 this was expanded to include combination nursing and rest homes. The first rules and regulations were adaptations of those formulated by the Medical Care Commission which had administered this licensing responsibility. These essential nursing home facilities have expanded from 38 in 1961 to 42 nursing homes and 18 combination nursing-rest homes in 1963. The nursing home section staff consists of a chief, a sanitary engineer, a dietitian, a physical-occupational therapist, and a nursing consultant. The staff has also had the assistance of a Consultant Committee. There have been several projects developed to aid in the improvement of nursing care such as in accounting, recreation, physical therapy and nutrition.

**Nutrition**—Since 1948 the nutrition program has provided consultation services in dietetics to State hospitals and prisons. More recently the dietary staff has been increased and the service extended to many convalescent, nursing, foster, and boarding homes. Stimulated by the field allocation of State funds in 1949, the number of nutrition consultants has increased from four to nine. Internships in nutrition are provided, and a nutrition education supervisor is responsible for interns, orientation courses in nutrition for students, and for graduate personnel. Since 1953 the nutrition staff, in cooperation with the State Hospital and the State Dietetic Associations, has conducted a yearly institute primarily for the personnel responsible for food service in hospitals. In 1958 the program emphasis was increased in the area of expectant mothers, infants, and children, and chronic disease patients. Training courses in these fields have been developed and the staff has been involved in many in-service programs in local health departments.

Special work continues to be aimed at the groups of greatest nutritional stress. In order to use the limited staff most effectively, activities are weighed toward consultation services and away from individual patient services.

## VII. SANITARY ENGINEERING

The responsibilities and program of work in sanitary engineering have changed in keeping with the times and new modes of living. New problems have required new approaches toward solving these problems.

Our greatest accomplishment has been in better public relations with the many groups and individuals served. Closer cooperation with other agencies has contributed to better sanitation practices in nursing and rest homes, prison camps, educational and medical institutions. Improvements have been made in our milk supplies, food and shellfish industry, municipal water supplies, migrant labor housing, municipal garbage and refuse disposal, and in insect and rodent control.

**Migrant Labor Camps**—The 1963 General Assembly enacted legislation setting forth minimum sanitation standards for agricultural labor camps. With funds from a federal grant, a sanitarian was employed to work full-time with growers, local sanitarians and Employment Security Commission representatives in promoting compliance with basic sanitation standards. The response to-date is encouraging.

**Sewage Disposal**—Our sanitation programs, which were primarily concerned with rural areas 15 years ago, are now focusing more attention on urban and semi-urban areas. For example, in 1947 we approved 3,000 privies and 7,500 septic tanks; and in 1963, 7,734 privies and 29,632 septic tanks. Many counties have improved their ordinances and are devoting more attention to the increasing fringe-area problems of water supply and sewage disposal.

**Food and Lodging**—The most comprehensive sanitation improvements have taken place in hospitals, nursing and rest homes, restaurants and school lunchrooms, handling dairy products, motels and hotels, and prison camps. Better equipment is being used and higher standards are being followed. Surveys recently completed in 43 counties of food and lodging places under legal supervision show an average compliance with State regulations of 86.7%. The number of Grade A restaurants has increased to 5,290 in 1963. Great progress in milk sanitation has been made so that now 76 counties have compulsory pasteurization ordinances. Approximately 99.86% of all milk sold in the State is pasteurized.

**Training Workers**—Considerable improvement in the education of sanitation workers has taken place. Classes for foodhandlers are held in cooperation with local health departments and the North Carolina Travel Council. In cooperation with the Department of Conservation and Development additional funds for personnel and a mobile laboratory have been obtained to enable us to keep a closer check on the sanitary quality of shellfish produced and distributed in North Carolina and interstate. In the food and

milk sanitation fields the increasing "automation" requires more knowledge and training and changes in procedures. In January 1963, the Vending Machine Regulations adopted by the State Board of Health became effective and ninety-eight vending commissary permits were issued during the year.

**Water Supplies**—Fluoridation and the better training of water works operators have been promoted. In-service training schools have been held by our engineering staff for water works operators. The total number of public water supplies under supervision increased from 310 to 780 serving approximately 2,250,000 people.

**Insect and Rodent Control**—Great progress has been made in insect and rodent control. With the control of malaria and typhus fever, the program has changed to be directed at all insects and rodents that adversely affect our health or comfort. Salt Marsh Mosquito Control support was added by the 1957 General Assembly. Financial and technical consultation has been given many local health departments and other governmental units engaged in mosquito control work. Fifty-one projects were provided with \$235,050 on a matching basis in 1963. Of this amount, \$127,732 was provided for Salt Marsh Water Management by major drainage on a basis of two State dollars for one expended from local funds. The remainder was used for other methods of control. Project applications from communities doing mosquito control indicate that during this fiscal year \$337,730 in expenditures will be made, exclusive of money spent on Salt Marsh Water Management.

**Radiation Surveillance**—The Environmental Radiation Surveillance Program began in 1958 to survey for radioactivity and for the determination of background levels of radiation by checking 147 sources of raw water used for public water supplies. The program now includes 147 raw and finished surface drinking water supplies and 167 ground water supplies. During the year, a total of 988 samples were collected and analyzed for gross alpha and beta activity. Six samples of cistern water were collected from four locations on Ocracoke Island for analysis. The surveillance of air-borne radioactivity was carried out by setting up sampling stations at eight municipalities throughout the State and 424 samples were collected for analysis for suspended particulates and radioactivity. From four rainfall surveillance stations, 75 were collected for analysis for radioactivity. Also, radiation measurements were made on 177 dustfall samples collected at nine sampling stations.

**Air Pollution Control**—Comprehensive short-term air pollution studies were made at Charlotte, Asheville, and Winston-Salem. The Division was awarded the National Cleaner Air Week Award of the National Air Pollution Control Association for its efforts in promoting Air Hygiene during Cleaner Air Week—1963. Cooperation with the National Air Sampling Network of the Public Health Service at six locations continues as part of the air pollution control program. The 1963 General Assembly passed the Act to Establish an Air Hygiene Program in the State Board of Health, which will enable the State Board to greatly increase the effectiveness of the air hygiene activities when funds are made available.

**Stream Sanitation**—The State Board of Health has devoted attention to the problem of municipal sewage disposal since passage in 1893 of the first State Laws relating to the protection of public water supplies. For years the State Board of Health was active in promoting the State Stream Sanitation Law and in 1949 implemented the first field studies and reports. This activity was transferred to the Department of Water Resources in 1959, but the State Board of Health still has the responsibility for final approval for waste disposal that may endanger public health through possible contamination of public water supplies.

### COMMENT

Change proceeds at a dizzying pace. New words and phrases, such as these, have now become commonplace:—break-through, population explosion, family planning, oceanography, sea farming, organ banks and replacement, magic vaccines and treatments, rehabilitation, life on Mars, supersonic travel, DNA and RNA, automation, and many others. In some supposedly progressive steps, we find, just as with our powerful useful drugs, some possibly harmful side effects. We have become partial captives of electricity; of monopolistic businesses, industries and labor unions; of spiraling costs (including medical care); of computers and other automation systems, and of fission and fusion energy. With all our sophistication we continue to pollute our soil, water, air and food. Our suicides or homicides are more than double, our home and farm fatalities are more than quadruple, and our highway barbarity accounts for more than seven times, our tuberculosis deaths. We overeat, drink and smoke excessively, under-exercise, and abuse our opportunities for recreation and relaxation. And, after we become soft, fat and flabby and begin to fall apart we call our easy life “the unusual strain and stress of modern living”. Since those before us survived other great hazards, perhaps we can still be optimistic justifiably, about our own hectic generation.

Respectfully submitted,  
J. W. R. Norton, M.D.,  
State Health Director

## State Health Director

The State Health Director has the overall direction of more than thirty public health programs as a major administrative responsibility. The work of the State Board administrative staff is grouped into seven divisions. The specialized character of the various programs and the highly trained personnel in charge of each combine to increase the demands made upon the State Health Director; while, at the same time, these highly competent specialists in each division are most dependable in their planning and working.

It is necessary for the State Health Director to keep abreast of progress in medicine and public health and to guide North Carolina's public health program in a direction which incorporates the best confirmed scientific advances in ways consistent with the public health philosophy. Acquaintance with Federal programs which affect related programs in this State is a continuing necessity. This involves much liaison work with Federal officials. He works with the U. S. Public Health Service and other Federal agencies which support in whole or in part some twenty-two public health programs in this State.

The State Health Director needs to maintain a wide acquaintance with the work of local health departments through personal and staff consultation visits and a review of the flow of reports coming in from and out to all sections of the State. This necessitates frequent travel engagements and many conferences with local health directors and with State staff.

Legislation enacted by the 1963 General Assembly placed upon the State Board of Health the entirely new responsibility for setting standards for breath testing devices to determine alcohol blood levels used in cases involving suspected drinking drivers and the certification of personnel to administer these tests. During the months since the enactment of this legislation, the State Health Director and the Assistant State Health Director have held conferences with experts in many fields to implement this new legislation.

The State Health Director has served on many State, and a few National, committees and commissions during the past biennium.

During 1963, the State Health Director served as President of the American Public Health Association which constitutes the largest public health body in the world. As immediate past-president, he still serves on the Governing Council and Executive Board.



## Biennial Report

**ADMINISTRATIVE SERVICES**

July 1, 1962-June 30, 1964

The Administrative Services Division maintained the same organizational arrangements as during the previous biennium, Budget and Accounting, Personnel, Public Relations, Film Library, Public Health Library, Emergency Health Preparedness, Supply and Service, and Central Files made up the unit activities.

The Director, in addition to coordinating the activities carried out by the above units, provided administrative assistance to the State Health Director and to the professional staff. In May 1964, the Division Director, Mr. Charles L. Harper, resigned to accept the position of Associate Director for Administration of the District of Columbia Department of Health.

Significant developments during the biennium included the following:

**BUDGET AND ACCOUNTING**

Total appropriations for public health in North Carolina for the past biennium increased by \$4,331,963 over the previous two-year period. Of this increase, the largest portion was local appropriations of \$1,586,679 and state appropriations of \$1,123,473. Departmental receipts accounted for an increase of \$52,128. The balance was in federal grants. The following table shows the specific amounts for the two bienniums:

	<u>Total</u>	<u>State</u>	<u>Federal</u>	<u>Local</u>	<u>Departmental</u>	<u>Receipts</u>
1960-1962	\$26,976,440	\$6,935,914	\$5,829,842	\$13,728,281	\$482,403	
1962-1964	\$31,308,403	\$8,059,387	\$7,399,525	\$15,314,960	\$534,531	
Increase	\$ 4,331,963	\$1,123,473	\$1,569,683	\$ 1,586,679	\$ 52,128	

**BIENNIAL BUDGET**

JULY 1, 1962 THROUGH JUNE 30, 1964

<u>Fiscal Year and Purpose</u>	<u>Total</u>	<u>State Appropriation</u>	<u>Federal Funds</u>	<u>Departmental Receipts</u>	<u>Local Appropriations</u>
<b>Fiscal Year Ending June 30, 1963:</b>					
Local Units:					
Health Departments (83)	\$ 8,683,464	\$ 1,490,560	\$ 175,802	\$ —	\$ 7,017,102
Mental Health Centers (30)*	1,098,425*	333,409*	77,950*	—	687,066*
Special Project Grants (32)	185,560	8,000	177,506	—	—
Total—Local Units	9,967,395	1,931,969	431,258	—	7,704,168
Other	5,557,994	2,129,724	3,162,198	266,072	—

Fiscal Year and Purpose	Total	State Appro- priation	Federal Funds	Depart- mental Receipts	Local Appro- priations
<b>Fiscal Year Ending June 30, 1964:</b>					
Fiscal Year Ending June 30, 1963	15,525,389	3,961,693	3,593,456	266,072	7,704,168
Local Units					
Regular Alloca- tions (82)	9,339,999	1,527,268	201,939	—	7,610,792
Special Project Grants (35)	248,465	12,784	235,681	—	—
Total—Local Units	9,588,464	1,540,052	437,620	—	7,610,792
Other	6,194,550	2,557,642	3,368,449	268,459	—
Total—Fiscal Year End- ing June 30, 1964	15,783,014	4,097,694	3,806,069	268,459	7,610,792
Total for the Biennium	\$31,308,403	\$ 8,059,387	\$ 7,399,525	\$ 534,531	\$15,314,960

\* All Mental Health appropriations and activities were transferred to the Department of Mental Health as of July 1, 1963 by action of the 1963 General Assembly.

No. of Purchase Orders Written 2,225

No. of Vouchers Written 22,031

## CENTRAL FILES

The Central Files operations continued to expand and adjust with the increasing and changing program activities. The centralized control of records establishes the responsibility for recording, protecting, and filing the official records and their finding when needed. It controls the systematic retirement of records to storage and the disposal of those no longer of administrative, historical, research or legal value. It establishes practical standards for procedures and operations, file arrangements, equipment and supplies.

During this period, 500,198 records were received for filing, and 56,084 searches for material and information were made. Emphasis was given to improving the accuracy of operations and to assisting in working out records keeping problems with staff generally.

## SUPPLY AND SERVICE

Increased activity from new and accelerated programs of the State Board of Health were reflected in greater demands for service from this section. Number of forms and other materials printed and distributed is an indication of workload as shown below:

	1960-62	1962-64	Inc.
Multilith copies reproduced	9,744,966	11,124,757	1,379,791
No. Educational materials & forms distributed	4,468,885	4,849,929	381,044

## FILM LIBRARY

This report period shows a tremendous growth in film distribution to the many borrowers in all one hundred counties of the state. With this increase for films we also are having an increase in the number of requests we are unable to fill. Each year the Library receives requests from many new

borrowers as the population increases, and as new schools, hospitals, and churches are constructed. In fact, if all the interested potential borrowers of the state were aware of this service today, the Library would in all probability be unable to fill more than half of the requests received. There are schools, churches, and many other groups in almost every county who do not now know of our service.

The Library purchased a total of 475 films during this report period at a total expenditure of \$51,653.85. Of this number only 79 new film titles were purchased. The other films purchased were either additional prints of films already in the Library or they were replacement films for those that have been worn out due to excessive utilization.

During this biennium the Library received a record number of 20,178 pieces of correspondence from borrowers requesting either films or other services available. There were a total of 62,542 films distributed to the borrowers of North Carolina in 53,704 individual shipments. Even with this largest of all film distribution the Library turned down another 3,021 requests from borrowers which we were unable to fill due to both the fact that we have an insufficient number of films to meet the demand, and also to the fact that many borrowers want the same film at the same time.

There were 3,713 visitors to the Film Library during this report period who were either borrowing films or for other services available to them.

More than 9,000 descriptive film catalogues were printed and distributed to the borrowers during this period which now includes 769 different film titles.

## PUBLIC RELATIONS

Citizens of North Carolina have shown a growing understanding of and appreciation for public health during this biennium. Gleanings from daily and non-daily newspapers across the state have reflected this. Conversations with leaders in various areas of the state's life have also borne this out.

Based upon the integrity of the public health program and personnel at work in North Carolina, every available means has been used to make the public aware of these health services. The activities of the seven divisions of the State Board of Health and of the local health departments have been made the subject of many articles appearing in newspapers throughout the state and of television and radio programs.

The Public Relations Officer has arranged for television and radio programs and has made addresses at meetings emphasizing public health and in meetings with related purposes. He has represented the State Board at a number of statewide conferences and some national meetings. He has also given frequent counsel to State and local staff members in the area of public relations. The Public Relations Office produces a bi-weekly Newsletter for State Board staff interest and use.

The Public Relations Office correlated legislative information and contacts during the sessions of the 1963 General Assembly. A publication showing the progress being made in health and health related legislation was compiled and distributed weekly to public health personnel.

As Editor of *The Health Bulletin*, the monthly official State Board publication now in its 79th year, he has the counsel of an eleven member Editorial Board representing many facets of the public health picture. This publication has sought to present subjects of importance to public health in a manner and language interesting to the general public. Its present mailing list numbers 47,000.

### MEDICAL-PUBLIC HEALTH LIBRARY

Indications are that the Medical and Public Health Library was considerably more active in 1962-64 than in 1960-62. It is hoped that this increased activity reflected a greater service to the State Board of Health and to the people of the state.

Some statistics for the two bienniums are as follows:

	1960-62	1962-64	Increase
Visits made to the Library	10,620	14,048	3,428
Journals borrowed	3,436	3,504	68
Books borrowed	10,148	12,649	2,501
Books added by Library	294	315	21

### PERSONNEL

Concentrated effort has been made to improve administration of personnel programs. Use of IBM systems has resulted in great savings of man hours and efficiency improved by placing the entire salary increment system on IBM. A directory of all employees is on IBM and a complete, accurate directory can be published on short notice. Personnel data, such as longevity, state service, age, classifications and the like have been programmed on IBM to facilitate reports.

Files and records have been evaluated and reduced by 42 file feet, thus giving workability to record keeping.

The Personnel Office expanded services and entered areas of personnel management heretofore undeveloped at the State Board of Health. The first personnel handbook was published and distributed to all state employees. An exit interview procedure was developed to facilitate study of turnover. Work has been done to develop an employee evaluation system. A supervisory training course was developed and administered. Five Plain Letters Writing Courses were made available to all employees.

A Personnel Forms and Procedures Training Course was offered to clerical employees of all local health departments. A handbook was developed and made available at the eight training sessions given throughout the state.

A retirement planning conference was prepared and made available to employees over sixty years of age. Retirement information kits have been developed to assist employees.

Employees of the State Board of Health increased by 25 in number from June 30, 1962, to June, 1964. The present total is 410 employees. The turnover rate remains approximately the same as in the last report, about 24 per cent. During the period covered by the biennial report, 201 employees were separated and 226 employees added to the payroll.

A longevity pay program was initiated by the state at the start of this biennium. The program affects less than 5 per cent of the staff of the Board of Health.

Eleven state employes retired under the Retirement Act during this period. Three of these retired due to disability.

Local Health Department employees decreased by 21 in the biennium. The present total is 1,331. The decrease is due to transfer of Mental Health personnel out of health departments.

### EMERGENCY HEALTH PREPAREDNESS

Prior to December 1962, the civil defense responsibility for Emergency Health Protection Services, delegated to the State Board of Health, was coordinated and directed by the Chief of the Crippled Children Section, Personal Health Division, as Deputy Chief in Civil Defense to the State Director of Health.

On December 3, 1962, the Division of Health Mobilization, Public Health Service, Department of Health, Education and Welfare, at the request of the State, assigned a program representative to the State Health Director to assist in the total program of Health Mobilization for Emergency Health Preparedness. The section of Emergency Health Preparedness was established within Administrative Services.

The section has attempted to coordinate the Emergency Health Preparedness program with the State Civil Defense Agency, the State Office of Emergency Planning and the Emergency Medical Care Services of the State Medical Society. The North Carolina Plan divides Emergency Health Service of the National Plan into Health Protection Services and Emergency Medical Care Services with the State Board of Health delegated responsibilities for the Health Protection and the State Medical Society delegated responsibilities for Emergency Medical Care. In an emergency situation there will be considerable overlapping, especially in administration and manpower delegation. Close cooperation in the planning for emergency medical care and emergency health protection is necessary for effective overall emergency health services when professional manpower and supplies may be limited and reduced.

In September of 1963, the State Medical Society recommended that the State Civil Defense Agency delegate responsibilities in connection with Medical Self-Help Training and Civil Defense Emergency Hospital pre-positioning and activation to the State Board of Health. These responsibilities were accepted and this section has spent a very considerable amount of time and effort in effecting the Emergency Hospital Program transfer. There are thirty-five units pre-positioned in the State and seven additional have already been approved. It will be several months before all hospital storage sites with deficiencies can be brought up to acceptable standards and new contracts negotiated.

The Medical Self-Help Training program has been active in twenty-eight of the one hundred counties. The transfer of the responsibility of this program to the official health agencies will require considerable consultation and encouragement on the part of the State agency to the local agencies.

## **DIVISION OF EPIDEMIOLOGY**

### **Biennial Report**

**July 1, 1962-June 30, 1964**

During the biennium ending June 30, 1964, several structural changes, made by administrative action, occurred within the Division of Epidemiology, especially within one of its sections, i.e., the Occupational Health Section with its Radiological Health Program responsibilities. The changes within this Section are discussed in detail later in this report.

The other change within the Division's organizational structure concerns the addition of a special Federal project, the Immunization Activity Program, which operates with considerable autonomy as a semi-independent unit in association with the Communicable Disease Control Section of this Division. This program, which is supervised by a Project Coordinator, Mr. Henry B. Woodard, is Federally financed and is set up for a period of three years, effective January 1, 1964. The Federal grant for 1964 is \$74,135. The object of this project is to promote intensification of present immunization programs throughout the State. Also, to study, by selection, certain counties which will be surveyed to determine the degree of immunized persons, both children and adults, on a county-wide basis. In the beginning of this program, five counties were selected for immediate study. Other county studies will be made during the lifetime of this project. The initial counties selected are Buncombe, Forsyth, Gaston, Greene and Halifax.

The formal organization of the Division of Epidemiology during this biennial period continued to show the following seven sections, as in previous years: Communicable Disease Control, Public Health Statistics, Venereal Disease Control, Tuberculosis Control, Veterinary Public Health, Accident Prevention, and Occupational Health, with its Radiological Health Program. The Division has been most fortunate in being able to continue the operation of all of its sections with well trained, experienced, highly qualified personnel who work harmoniously with employees of this and other Divisions.

The position of Chief, Communicable Disease Control Section, has continued vacant since the former Chief, Dr. Jacob Koomen, was appointed Assistant State Health Director in October 1961. Dr. Koomen has continued throughout this biennium, as previously, to supervise the U. S. Public Health Service Surveillance Officer assigned to this Department by the Communicable Disease Center of the Public Health Service in Atlanta, Georgia. During this biennial period, two excellent Epidemic Intelligence Service officers have served in North Carolina under Dr. Koomen's immediate supervision: Dr. George Magnus Johnson from August 1961 until his transfer elsewhere in July 1963, and Dr. Ronald H. Levine, who succeeded Dr. Johnson in August 1963 and is presently serving as Field Epidemiologist for the Communicable Disease Control Section. The assignment of such well qualified E.I.S. officers to North Carolina by the U. S. Public Health Service continues to be of immeasurable value to the North Carolina State Board of Health and to the people of the State.

During this biennium, two changes occurred in the roster of Section Chiefs for the Division of Epidemiology. Effective October 1, 1962, Mr. C. R. Council, Chief of the Public Health Statistics Section for many years, resigned to accept a more remunerative position in State Government. Under his administration of our largest section, a high level of excellence was achieved and maintained, resulting in greatly increased services to the people of North Carolina as well as to other agencies and institutions. We were very fortunate to be able to obtain the services of Mr. Glenn Flinchum to succeed Mr. Council. Mr. Flinchum, who at one time was Assistant to Mr. Council, is very well trained and experienced in the work of the Section and is well qualified to continue the efficient and progressive operation of this important program.

The second change in our list of Section Chiefs occurred with the transfer of Mr. Harold Mauldin by the U. S. Public Health Service from the assignment as Chief of the Venereal Disease Control Section to another responsible position elsewhere in the Service. Mr. Mauldin's transfer was effective near the close of the fiscal year 1962-63. He was succeeded by another well trained and experienced Federal staff member, Mr. James W. Hicks. Mr. Hicks has made excellent progress in carrying on the nationally recognized training program in North Carolina which was so ably conducted by Mr. Mauldin and his predecessors. Presently, the U. S. Public Health Service has assigned 32 field personnel to this program. Of this total, 26 are in training as program representatives, four as field supervisors, and two—the Section Chief and his Assistant—are assigned to the Central Office in this Department.

The greatest expansion within the Division during this biennium has occurred in the Occupational Health Section and in its Radiological Health Program. The very able Director of this important activity, Dr. William L. Wilson, has reorganized this work into several sub-sections which operate very efficiently within the original framework of the Section. At the close of the biennium, there are several vacancies in this Section, one of which is the position for a nurse trained and qualified in occupational nursing work.

Amendments to vital statistics laws, enacted by the 1963 General Assembly of North Carolina, greatly improved the regulatory authority of the State Registrar in the matter of promptness of reporting births and deaths, also in more prompt filing of burial-transit permits.

Other important legislation enacted by the 1963 General Assembly affecting the records within this Division included the reporting, by pathologists, of all diagnosed cases of cancer. This resulted in an increase in the rate of cancer cases reported to this Department from about 3,000 per annum prior to enactment of this legislation to approximately 12,000 per annum after its enactment.

Although no significant change occurred in the present biennium in the over-all pattern of the Tuberculosis Control Program, it is expected that due to reduction in Federal appropriations for this service, considerable changes probably will occur during the coming biennium in the type of program being conducted throughout the State by the Tuberculosis Control Section. This will particularly affect the existing mobile x-ray service of

that Section, resulting in a necessary reduction in personnel in that phase of the work in favor of an expansion in special research projects in tuberculosis control. Plans are already under way to change the emphasis of this program from mobile x-ray work to special research studies in determination and control of tuberculosis, continuing the excellent leadership of Dr. W. A. Smith, Section Chief.

During this biennium, the Accident Prevention Section continued to function very effectively under the immediate supervision of the well qualified Section Chief, Miss Nettie Day. Among the projects given special emphasis during this biennium by this Section are the following: (1) Vigorous promotion of the widespread use of seat belts for automobiles throughout North Carolina; (2) Active promotion of the establishment of poison control centers throughout the State; (3) Participation in and promotion of the N. C. Ambulance Service Study, which is designed to reduce and eventually eliminate unnecessary accidents by ambulances due to disregard of safety precautions; (4) Establishment and promotion of a pilot study on a county-wide basis in Robeson County on the subject of fire and burn injury prevention, in cooperation with the U. S. Public Health Service and the Robeson County Health Department.

The Veterinary Public Health Section of this Division continued during this biennium under the immediate supervision of the highly qualified Section Chief, Dr. Martin P. Hines, who has developed and directed this program from its beginning in July 1951. It is now recognized as an outstanding veterinary public health program in the nation. Requests for assistance from the Chief of this Section in the investigation and control of diseases of animals transmissible to man, also in the investigation and control of food poisoning outbreaks throughout the State, continue to increase from the local health departments of North Carolina as the need for his consultative services grows.

No major outbreaks of communicable diseases have occurred during this biennium; however, the nation-wide prevalence of influenza in 1962-63, which resulted in widespread incidence of the disease in North Carolina, brought national publicity to the State due to the fact that Asian influenza was recognized in North Carolina before it appeared anywhere else in the country that winter.

During the biennium the prevalence of Rocky Mountain spotted fever continued to increase, with North Carolina ranking second highest in the United States. The chief means of eradicating this problem seems to be through education of the public as to the danger of infected ticks. The vaccine now available is not practicable for general use but is limited to persons whose occupation subjects them to continuous exposure to ticks. The State Board of Health attempts each year a widespread educational effort to alert the public to the necessity of prompt removal of ticks from the body.

Tetanus became a cause for alarm in North Carolina during this biennium, cases reported having risen from one in 1959 to 21 in 1963, three-fourths of whom died. Public health officials joined the practicing physicians of the State in urging the public to take advantage of the available vaccine. This effort should be and will be continued.



In the Spring of 1964 mass poliomyelitis vaccination campaigns, using the Sabin oral vaccine, were sponsored and conducted by the State and local medical societies of North Carolina. Although statistical reports on these vaccinations were handled by and the responsibility of the local medical society sponsoring each of these campaigns and conducting the clinics and therefore this information was not reported on a widespread basis by the local health departments in their reports to this Division, it is estimated that many thousand citizens of North Carolina received this immunization. This is indeed a valuable supplement to the routine vaccination with Salk poliomyelitis vaccine that has been the responsibility of our local health departments for a number of years. The following is a summary report of these latter vaccination programs with Salk vaccine:

### Poliomyelitis Vaccination Program (Salk vaccine)

During the 1962-64 biennium, in compliance with the 1959 North Carolina poliomyelitis vaccination law, State-purchased poliomyelitis vaccine (Salk) was distributed by the Laboratory Division to North Carolina counties on a quota basis, according to population within the birth-through-6-years age group. This continued the policy established in 1959 when the first vaccine was purchased with an allocation from the State's Contingency and Emergency Fund. Inoculations given with this vaccine have been reported to the Division Director's Office, in this as in previous biennial periods, and processed by that office.

From July 1, 1962 through December 1963, booster inoculations were reported to this Division by age group, according to the age group pattern previously approved by the Statewide Local Records Committee. Effective January 1, 1964, however, the Committee revised the report form so as to eliminate the reporting of boosters by age group and provide data on total boosters for all ages only. The following tables summarize, for the State as a whole, the available reported data on completed basic series (3rd injections) and on booster inoculations (with the limitations herein noted) for the period July 1, 1962 through June 30, 1964:

Table 1

Inoculation Data for Birth through 6-Years Age Group  
July 1, 1962-June 30, 1964

Completed Basic Series (3rd injection) .....	101,533	(7/1/62— 6/30/64)
*Booster Inoculations .....	*100,603	(7/1/62—12/31/63)

*\*Note:* This total for birth through 6 years represents reports for ONLY THE 18-MONTHS PERIOD FROM JULY 1, 1962 THROUGH DECEMBER 31, 1963, as the Statewide Local Records Committee eliminated the reporting of booster inoculations by age group, effective January 1, 1964. Therefore, the above table shows boosters BY AGE GROUP for the period available (7/1/62—12/31/63), whereas Table 1-A below shows boosters FOR ALL AGES COMBINED (grand totals only) for the entire biennium: 7/1/62—6/30/64.

Table 1-A

Inoculation Data for All Ages (includes groups shown in Table 1)  
July 1, 1962-June 30, 1964

Completed Basic Series (3rd injection) .....	123,027
**Booster Inoculations .....	**214,663

*\*\*Note:* This total is for ALL AGES for the entire biennium (July 1, 1962-June 30, 1964). See explanatory note shown with Table 1 above.

Table 2

Inoculation Data, by Age Group, for Basic Series and Booster Inoculations  
July 1, 1962-June 30, 1964

Age Group	Completed Basic Series (3rd Injection) (available for the entire biennium)	Boosters (available by age for 18 mos.) (7/1/62-12/31/63); available for all ages combined for 6 months period 1/1/64-6/30/64)
Under 1 year	29,740	1,603 (for 7/1/62-12/31/63)
1 through 4 yrs.	40,066	44,891 ( " " " )
5 and 6 years	31,727	54,109 ( " " " )
TOTAL FOR BIRTH THROUGH 6 YEARS	75,559	100,603 ( " " " )
7 through 20 years	15,970	78,681 ( " " " )
Over 20 years	5,344	13,540 ( " " " )
TOTAL FOR ALL AGES (includes birth through 6 yrs.)	123,027	*214,663

\* Includes 192,824 boosters BY AGE GROUP, 7/1/62-12/31/63 and 21,839 boosters FOR ALL AGES (no age breakdown) reported 1/1/64 through 6/30/64.

Detailed reports of the Sections operating within the Division of Epidemiology follow:

#### Communicable Disease Control Section

The activities of this Section within the biennium have included: (1) Tabulation of cases of reportable communicable diseases; (2) Analysis, at frequent intervals, of the data obtained; (3) Preparation and publication of weekly, monthly, and annual reports of communicable diseases in North Carolina; (4) Epidemiologic assistance and consultation where problems in communicable disease control exist; (5) Education in the area of infectious diseases, including lectures to local medical societies, hospital staffs, nursing-in-service programs, etc.; (6) Field investigations of reportable communicable diseases.

The record of the past biennium continues to demonstrate the effect of increasing utilization of active immunizing agents as a method of communicable disease control. Most of those diseases for which active immunization is available continue to show declining morbidity rates. Progress in the isolation and identification of viral agents has led to the classification of new disease entities and to the hope of their eventual prevention by active immunization.

The incidence of poliomyelitis has continued to decline during this biennium, reaching the remarkably low figure of seven cases during 1963. Much of this decline must be attributed to the widespread use of inactivated poliomyelitis vaccine. The eventual eradication of poliomyelitis as a disease may well rest upon the adoption of live oral poliomyelitis vaccine as a routine immunizing agent for infants. The Communicable Disease Control Section made all its resources available to many county medical societies during the Spring of 1964 when a mass oral poliomyelitis vaccination campaign reached almost 3,000,000 North Carolinians.

Another example of the more than gradual decline of those diseases for which prophylaxis is available is that of diphtheria. Only four cases of

diphtheria were reported in the State in 1963, and not a single case has been reported during the first six months of 1964.

A notable exception to this encouraging record is tetanus. From an all-time low of one reported case in 1959, the incidence of tetanus has risen steadily and in 1963 21 cases were reported from North Carolina. Three-quarters of these individuals succumbed to the disease. Epidemiologic investigation revealed that none had been adequately immunized. The failure to eliminate tetanus as a public health menace rests not with inadequacy of the available vaccine but with inability to insure its wide use throughout the State.

Although North Carolina recently reported its first outbreak of infectious hepatitis related to the consumption of raw shellfish, presumably obtained from closed polluted waters, the over-all incidence of this disease has shown, during 1962 and 1963, a progressive decline from the high figure of 2,194 cases reported during 1961. This disease is by no means being "controlled", and a real diminution in its prevalence must await isolation and identification of the causative agent.

North Carolina now ranks second only to Virginia in the incidence of spotted fever. No appreciable change in the number of cases reported from this state has occurred in the past 10 years. The available vaccine is used only sparingly and then only in persons with occupational exposure. During the early summer of 1964, an educational campaign was initiated in state-wide news media with the hope that parents of preschool and school-age children would inspect and free their children of ticks before transmission of the rickettsial agent could take place. No other preventive measures have been shown to be of assistance in the control of this disease.

With improvement in laboratory diagnostic aids, more and more food-borne gastro-intestinal infections and intoxications are being accurately identified as to exact etiology. Several instances of *Salmonella* gastro-enteritis, arising from improperly prepared poultry products, were investigated during 1962 and 1963. Despite intensive surveillance throughout the State, no cases of botulism have been reported in the past five years.

Twenty-four cases of typhoid fever were reported during 1963, the largest number since 37 were reported in 1955. Approximately 70 typhoid carriers are under surveillance in the State. Most cases of typhoid fever in North Carolina can be related directly to sub-standard living conditions, with hygienically unacceptable water supplies and sewage disposal.

This state had the distinction of having the first recognized epidemic of Asian influenza in the United States during the 1962-1963 winter season. An estimated 400,000 cases of influenza were encountered during the epidemic in this state. Continuous spread of the disease was noted up and down the Eastern seaboard with gradual spread to the Ohio Valley and mid-western states by mid-March and early April. The epidemic largely spared the mountain states and Pacific Coast regions.

All but one of the 11 reported cases of malaria during 1963 were imported by the military. One individual was artificially infected with malaria while serving a prison term in a Federal penitentiary (part of an experiment under the auspices of the National Institutes of Health).

For the eighth straight year, no cases of human rabies were reported in North Carolina. It has been 10 years since a case of smallpox has been reported from this state.

Shown below is a table presenting data relative to the number of cases of the major communicable diseases in North Carolina for the years 1962-1963 and January through June 1964:

Disease	NORTH CAROLINA—REPORTED CASES BY ONSET		
	Jan.-Dec. 1962	Jan.-Dec. 1963	Jan.-June 1964
Diphtheria	11	4	—
Encephalitis	42	28	17
Hepatitis	1,783	1,032	303
Malaria	34	11	2
Measles	940	1,606	1,049
Meningococcus Infections	72	81	55
Poliomyelitis	15	7	5
Rocky Mountain Spotted Fever	35	34	6
Scarlet Fever	804	728	398
Septic Sore Throat	570	857	339
Smallpox	—	—	—
Tularemia	5	—	4
Typhoid Fever	13	24	3
Typhus, Endemic	2	1	1
Undulant Fever (Brucellosis)	—	6	1
Whooping Cough	152	144	68
Tetanus	11	21	6

### Immunization Activity Program (Federal Project)

The purpose of this program is to coordinate Federal, State and local health activities in the continuing effort to secure adequate immunization of all the population of North Carolina. Our General Statutes require that all newborns be immunized against diphtheria, pertussis (whooping cough) and tetanus as well as poliomyelitis and smallpox prior to entering school. Immunization against these diseases is available to all persons in North Carolina through their physician or local health department.

On January 1, 1964, a project grant request from the U. S. Public Health Service was received by the N. C. State Board of Health to assist local health departments in intensifying present immunization activities and establishing permanent immunization maintenance programs. Counties included in this project for calendar year 1964 are: Buncombe, Forsyth, Gaston, Greene and Halifax.

Activities of this program during the period of its establishment have included: (1) Random sampling surveys in the project counties to determine areas of low immunization, and (2) Establishing means to reach persons in these areas of low immunization to inform them of the need for and availability of adequate immunizations.

### Veterinary Public Health Section

This Section has the responsibility for planning, developing and administering a Statewide program of veterinary public health and comparative medicine, including the control of diseases of animals transmissible to man.

The major activities are carried out through consultation, education, research and service.

**Rabies.** Progress continued in the control of rabies. Assistance was given to several counties in developing adequate control programs. Surry, Alleghany and Stokes counties reported cases of fox rabies and a serious wild-life rabies problem may develop in this area. Bat rabies was reported in 1963 for the first time in North Carolina. Bat virus isolations were made from seven counties, and several incidents of bats attacking people were reported. One lot of phenol-killed dog vaccine was found to be contaminated with clostridium bacteria in Johnston County. Several dogs developed abscesses following the use of this vaccine before it could be withdrawn.

**Epidemiological Investigations.** Assistance was given to local health departments in the investigation of the following diseases: Blastomycosis, typhus fever, brucellosis, leptospirosis, Q fever, encephalitis, trichinosis, psittacosis, salmonellosis, anthrax, and hepatitis from eating contaminated oysters and clams. Contact with infected swine in eastern North Carolina continues to be the source of most cases of human brucellosis.

**Surveillance Programs.** Surveillance of industrial anthrax in textile plants processing foreign goat hair continued. Plant immunization of employees and other preventive measures were effective with only one human case reported. A program to immunize against rabies individuals with unusual risks of repeated exposure to animal bites was continued with follow-up on those participating.

**Meat and Poultry Inspection.** Assistance was given to several counties attempting to coordinate local meat inspection programs with the Statewide compulsory program enacted by the 1961 General Assembly. A model local meat inspection ordinance was prepared for use in several counties.

**Rendering Plant Inspection.** Routine annual inspections were made of all plants in the state, as required by law. Two proposed sites for the location of new plants were inspected. A location in Randolph County was approved and a site in Cleveland County disapproved.

**Teaching and Research.** A credit course, **Veterinary Medicine and Public Health**, was presented by the Section Chief at night for graduate students at the School of Public Health, University of North Carolina. The Section Chief also served on the Graduate School Examining Committee for doctorate candidates at the University of North Carolina and was guest lecturer at the University of Pennsylvania and at Duke University.

**Consultations.** The Section Chief consulted with local health directors and staff, county boards of commissioners and health, veterinarians, physicians, civic groups, school officials, wildlife clubs, and other state agencies on various matters relative to veterinary public health. A monthly newsletter was distributed to all local health departments.

**Scientific Papers.** Papers prepared and presented by the Section Chief during this biennium were: (1) "Review of Rabies Control in North Carolina for Past Thirty Years", Communicable Disease Center, Conference on Rabies, Atlanta, Georgia, 1962; (2) "The Zoonoses as Occupational Hazards", Colorado Public Health Association, Glenwood Springs, Colorado,

1963; (3) "The Teaching of Veterinary Public Health in Schools of Veterinary Medicine", Pan-American Health Organization, Mexico City, Mexico, 1963; (4) "Veterinary Contributions to Rural Health", American Public Health Association, Kansas City, Kansas, 1963; (5) "Salmonella Contamination of Egg Products", Hospital Food Service Institute, Durham, N. C., 1964.

**General Activities.** In September 1963, the Section Chief was elected President of the North Carolina Public Health Association. On August 25-31, 1963, the Section Chief was a consultant to the World Health Organization for a seminar on the teaching of Preventive Medicine and Public Health in the Schools of Veterinary Medicine in the Americas. The seminar was held in Mexico City.

The Section Chief continued to serve on the Council on Education, American Veterinary Medical Association and as advisor to the American Medical Association on rural health. On April 9, 1963, the Section Chief was elected to Phi Zeta, National Veterinary Honor Society.

### Public Health Statistics Section

This Section continued to experience an increase in the number of vital records received and processed as well as in the rendering of statistical services. The central registration of marriages, begun in January 1962, was responsible for adding approximately 35,000 records annually to the total volume. Provision was made for preserving these records by the purchase of new shelving for the first floor vault, and the construction of a mezzanine floor, thus making full utilization of all vault space.

The number of paid certifications and money receipts for the biennium were as follows:

	1962-63	1963-64
Certifications	34,635	36,237
Receipts	\$40,332	\$42,290

There was also an increase in the number of adoptions and legitimations received and processed.

The 1963 General Assembly enacted some amendments to the vital statistics laws for the purpose of encouraging more promptness in the signing and filing of death certificates. These amendments also gave the State Registrar more regulatory authority in the filing of certificates and issuance of burial-transit permits.

Also, legislation requiring pathologists (in addition to other physicians) to report diagnosed cases of cancer became effective July 1, 1963. As a result, these reports are now received and processed at an annual rate of about 12,000 versus about 3,000 prior to the new law.

A very important function of the Section is to provide useful vital statistics information to local health directors, program heads within the State Board of Health, and other consumers, on a regular basis. Monthly reports containing provisional figures are followed by more comprehensive official annual reports which include data on morbidity, births, deaths, marriages, and divorces of North Carolina residents. Population estimates and breakdowns of vital events by such characteristics as color, sex, age,

cause of death, and other important variables are also included in the regular reports. A continuing effort to improve the content and timeliness of these reports is maintained.

In addition to the regularly scheduled publications, special reports are prepared on subjects of general interest, as time permits. North Carolina *Abridged Life Tables, 1959-1961*, printed in the Spring of 1963, is such a report.

The Section participates in special studies and research projects in cooperation with program heads, other agencies, and institutions. The Fetal and Neonatal Mortality Study, Automotive Crash Injury Research, and Nursing Time and Cost Studies are projects of this type current to this biennium.

The Immunization Activity Program, effective January 1964, is being assisted by the Section in immunization surveys of local health areas. This assistance involves selection of area samples, training and supervision of interviewers, editing and coding of interview forms, tabulation and analysis of data, and preparation of narrative reports of results.

Organizationally, the Public Health Statistics Section is comprised of Administrative, Statistical Analysis and Reports, Data Processing, Registration, Certification, and Marriage and Divorce units employing 67 persons as of June 30, 1964.

### **Tuberculosis Control Section**

In general, the program content of the Tuberculosis Control Section for the biennium consisted of tuberculosis case detection through mobile chest x-ray surveys, general consultant services, and other aids to counties in tuberculosis control.

Chest x-ray surveys consisted of surveys of the general population and special groups under the supervision of the local health director. Organizations which cooperated in surveys were the local tuberculosis association, local medical society, local board of health, Negro leaders of the community, civic clubs, churches, county commissioners, other organizations and persons interested in public health. On account of a reduction in funds, four mobile units only were used and on rare occasions a fifth unit. Special groups for survey consisted of the population in low income communities, known areas of high rates of infection; also, industrial plants, educational institutions, State institutions such as Central Prison, prison camps, State hospitals and School for Blind and Deaf.

The Section cooperated in tuberculin testing projects in counties by placing on loan tuberculin testing supplies and also furnishing nurse consultant services. During the biennium, 27 counties had this assistance.

Health education was conducted both before and during x-ray surveys, and emphasis placed on the continuous follow-up of those cases which have been found to have chest abnormalities. Publicity material was furnished health departments without charge. A health education consultant and nurse were available to assist counties.

Follow-up activities in many surveys were conducted by our two x-ray technicians whose duty is solely for this type of work.

Other duties performed by the Section consisted of: (a) participation in special case detection projects such as the present "Crash Program" in Halifax County with U. S. Public Health Service aid; (b) organizing with the USPHS County Tuberculosis Control Grants, using Federal funds for Special Tuberculosis Control Projects in counties, namely, Forsyth, Alamance, Guilford, Rockingham, and Halifax; also, additional aid for the N. C. Laboratory of Hygiene in Raleigh; (c) organization of county chest clinics in cooperation with the State Sanatorium System and the attendance by the Director of five such clinics; 80 counties are now served by a chest clinic which is either located in the county health department or in the immediate area; health departments in five counties offered tuberculosis consultant services; two cities have organized independent chest clinics of the county; the Cherokee Indian Reservation has an independent clinic; (d) dissemination of pertinent tuberculosis control literature to counties; (e) conducting the County Extension Service, formerly conducted by the Sanatorium System; (f) cooperation with the Heart and Cancer Section, State Board of Health, by furnishing to that Section timely reports showing cardiovascular abnormalities and lung cancer suspects found in our chest x-ray surveys; (g) furnish funds from our budget to employ personnel in the Laboratory of Hygiene and Statistical Section, which are our supporting services; (h) cooperation with the State Department of Welfare in the chest x-ray of public assistance recipients; (i) cooperation with the Nutrition Section, State Board of Health, this Section furnishes advice to patients in chest clinics and also to the State Sanatorium System; (j) close liaison with the Sanatorium System, the State Tuberculosis Association, the State Rehabilitation Division.

**Personnel and Equipment.** Personnel consisted of one physician, fulltime, the Director; one physician, part time, for occasional assistance in 70-mm. x-ray interpretation; seven full-time x-ray technicians, one part-time dark-room technician; one clerk in the field; two clerks in the Central Office.

**Equipment.** Six trailers housing x-ray equipment, one trailer used as an office, one trailer which houses a 14 x 17 x-ray unit for follow-up activities, one trailer used for general storage; three x-ray machines on loan to Duke Hospital, Halifax and Edgecombe counties.

**Accomplishments.** During the biennium, the Section conducted 69 chest x-ray surveys in 53 different counties; 15 of the 53 were entered twice, two were entered three times, and one was entered four times during the biennium. As of June 30, 1964, this Section has made chest x-rays of 4,207,289 persons since organization in July 1945. Our mobile x-ray units have entered every county in the State except Surry, Lee and Alamance. A tabulation of x-rays made in the field by Section units, x-rays interpreted in the Central Office for counties, x-rays made by our unit on loan to Duke Hospital, Halifax and Edgecombe counties, and x-rays interpreted by the Director at chest clinics follows:

1. Miniature x-ray films made by Section units during chest x-ray surveys .....	401,142
2. Large films estimated to have been interpreted in follow-up activities .....	7,500
3. Miniature films made by our units on loan (Duke Hospital, Halifax and Edgecombe counties) .....	42,924
4. Miniature films interpreted for counties, in the Central Office .....	61,888
5. Read by the Director at county and city chest clinics (14 x 17 films) .....	4,813
Grand total .....	518,267



**Findings.** Tuberculosis findings as a result of chest x-ray surveys have steadily decreased in the State as a whole since 1956. Other chest findings, such as pleural changes, approximately 0.6% and cardiovascular abnormalities 0.5%-1.0% show no change. Tuberculosis findings, however, in some surveys have been productive, such as Pitt and Columbus counties. On account of low tuberculosis findings, there will be a shift of emphasis from chest x-ray surveys to tuberculosis control projects sponsored by the U. S. Public Health Service. These projects will emphasize the improvement of services to unhospitalized patients—clinic, laboratory, public health nursing; also attention to tuberculosis suspects and contacts and emphasizing isoniazid prophylaxis in children and adult contacts to active cases.

### Venereal Disease Control Section

The venereal diseases continued to be serious health problems in North Carolina during the biennium in spite of important progress made during the period to control them. Gonorrhea and syphilis were the two highest reported diseases in the state and, together, constituted almost two-thirds of all reported communicable disease.

Since 1957, infectious syphilis has increased more than 400 per cent in North Carolina caused by a number of reasons, including a lack of public and financial support. The trend of continuing percentage increases yearly in the reporting of infectious syphilis was reduced sharply during the biennium.

After experiencing an alarming 46 per cent increase in infectious syphilis in fiscal year 1963 over fiscal year 1962, North Carolina during the latter half of the biennium demonstrated a sharp reduction in reported syphilis when the percentage increase was reduced to 9.1 per cent, as is indicated in the following table:

**Reported Cases of Venereal Disease  
Fiscal 1963-1964**

	1963				1964				Per Cent Change
	PP*	Clinic	Mil.	Total	PP*	Clinic	Mil.	Total	
Syphilis									
Primary and Secondary	246	673	62	981	242	718	110	1,070	+ 9.1
Early Latent	169	412	25	606	101	319	19	439	-27.6
Late Latent & Other Late	1,044	937	7	1,988	735	594	2	1,331	-33.0
Congenital	67	73	—	140	32	44	—	76	-45.7
Total Syphilis	1,526	2,095	94	3,715	1,110	1,675	131	2,916	-21.5
Gonorrhea	816	6,944	927	8,687	1,009	7,413	945	9,367	+ 7.8
Other Venereal Diseases	10	70	9	89	6	71	3	80	-10.1

\* Private Physician

Although the above figures are alarming, their significance must be viewed in proper perspective. An accelerated case-finding program accounted for much of the reported infectious syphilis, and while the reporting of this stage increased during the biennium, the reporting of all other stages decreased. This trend suggests that as more and more cases are

being discovered in the infectious reservoir, fewer are making the transition to latent stages to be detected and reported at a later date. It is expected that reported cases of infectious syphilis will continue to increase into the next biennium before a downward trend is reflected.

The finding of early syphilis cases was the most important phase of the control program during the biennium. Through the intensive application of contact interviewing, cluster testing, and the rapid investigation of contacts, Program Representatives performed successful epidemiology at a rate among the nation's highest.

Realizing a program for the eradication of syphilis must center about the physicians in private practice, Program Representatives personally visited physicians throughout the State to increase their awareness of the venereal disease problem and to encourage the reporting of all cases of venereal disease. The offer of other epidemiologic services, including confidential case-finding and mobile darkfield microscopy, was an important part of the visit.

Periodic visits were made during the biennium to laboratories performing serologic tests for syphilis to solicit the reporting of all reactive tests. Follow-up activity was initiated on those individuals with reactive tests.

Educational programs, including lectures, films, and the distribution of pamphlets, brochures, and other informational materials were presented by Program Representatives to specific groups and the general public. Some progress was made in efforts to promote venereal disease education into the curricula of public schools.

Assistance was continued during the biennium to local health departments. In addition to furnishing free drugs, reimbursement was provided for local physicians who treated venereal disease patients on a fee-for-service basis when clinic facilities were not available.

All prison units in the State were visited in fiscal year 1963 to assist them in implementing better working procedures concerning the management of actual and possible cases of venereal disease among inmates.

Serologic screening programs were conducted throughout North Carolina in pockets of high syphilis prevalence and where the venereal disease rate was suspected of being high.

The Venereal Disease Control Program participated in several studies during the biennium including one to prove the effectiveness of cluster testing as a case-finding technique and one designed to evaluate a teaching program in the venereal diseases for junior high school students.

In a cooperative agreement with the U. S. Public Health Service, 66 Program Representatives received training in the methods of venereal disease control while participating in the syphilis eradication project. Fifteen states were furnished Program Representatives trained in North Carolina.

The total expenditure for the Venereal Disease Control Program for the 1962-1964 biennium was \$181,678.94. Of this amount, the State contributed \$70,754.76 and the balance of \$110,924.18 was supplied by Federal funds. Not included in this amount was direct Federal aid, which provided 32

Public Health Service assignees to North Carolina each fiscal year of the biennium.

### Accident Prevention Section

All accidents continue to be a leading cause of mortality, injury and disability in North Carolina. In 1962, accidents ranked fourth among the 10 leading causes of death in the state causing 2,719 deaths. Of the total number, 1,369 were caused by motor vehicle accidents; 793 deaths were caused by home and farm accidents; the remaining 557 deaths were caused by accidents occurring in public places, occupational pursuits, and non-motor vehicle transport accidents. Deaths from fires and associated causes and from falls are the leading types of home and farm accident fatalities. Young children (aged one through four years) and older adults (65 years and over) are the two age groups which have the highest rates of home and farm accidental deaths. Since individuals in these two age groups spend a proportionately greater share of their time in the home, their unfavorable experience in this type of accident is easily understood.

Statistical data regarding accidental injury in the home and on the farm are not available for the whole state since there is no single agency or mechanism for the reporting of non-fatal accidental injuries occurring in these sites. Estimates based on nation-wide studies would place the number accidentally injured in the home and on the farm in North Carolina at a minimum of 110,000 persons annually, with the maximum reaching a total of 400,000 persons per year.

During the biennium, the Section worked with health departments in 38 counties on accident prevention activities. These activities with local health departments have varied from assistance in planning and conducting staff education programs to help in planning and carrying out special safety projects.

The Section has assisted 25 local units of the North Carolina Agricultural Extension Service. This has consisted primarily of help to county agricultural extension chairmen and home economics extension agents in planning safety demonstrations for meetings, in planning safety activities for 4-H clubs, and in providing resource materials and visual aids.

The Section has participated actively in the efforts of the North Carolina Rural Safety Council. The Council's two major projects are sponsoring an annual Rural Safety Conference and the promotion of National Farm Safety Week, which is observed annually the third week in July.

Activities with the Parent-Teacher Associations have continued. During the biennium, in cooperation with the North Carolina Congress of Parents and Teachers and other safety specialists, the Section participated in an Eastern Area Safety Conference at East Carolina College for unit PTA presidents, program chairmen, and safety chairmen in the eastern half of North Carolina.

The Section has continued its participation in the Robeson County Fire and Burn Injury Prevention Project in cooperation with the U. S. Public Health Service and the Robeson County Health Department. This project, designed to develop a public health approach to the childhood burn injury problem, is now in its third year of operation.

The Section has actively promoted National Poison Prevention Week, which is observed the third week of March annually. Kits of material have been distributed to local health departments and other interested groups. In 1964, film clips were furnished to all TV stations.

The Section has participated in the North Carolina Ambulance Service Study, a research project being conducted by the North Carolina Hospital Association Education and Research Foundation in cooperation with the Institute of Government and the Department of Hospital Administration of the University of North Carolina Medical School. The Section Chief is a member of the Advisory Committee to the project. Ten local health departments participated in data collection for one phase of the study.

The Section has participated in two short courses (one held each year of the biennium) in Public Health Accident Control at the University of North Carolina School of Public Health. The Section Chief serves as a member of the School's Public Health Accident Control Advisory Committee. She also serves as field counsellor for students enrolled in the Public Health Accident Control training program.

During the biennium, the Section has continued its publication of the newsletter "Home Safety News Notes." One new safety booklet for children was developed during the biennium—"Safety Zoo"; more than 30,000 copies have already been distributed. A 10-year report (1952 through 1961) of farm tractor fatalities in North Carolina was prepared during the biennium, in two parts: Farm tractor accident fatalities on the farm itself and farm tractor fatalities on public roads. This study revealed that 236 farm tractor accident fatalities occurred on farms and 107 fatalities on public roads in the State in the 10-year period.

## Occupational Health Section

### State Radiation and Occupational Health Protection Program

Slow progress in occupational health, recognized in previous similar reports, continues. Since 1935, this has been the only definable public health protection program at their work places for 42 per cent of our people, for directing State attention to health matters affecting their industries, property, health, and lives. Yet, all economic, educational, research, and sociological progress depends upon their health, production, incomes, taxes, and votes. Since 1935 three administratively grouped, separate programs covering 32 statutory Board responsibilities have consisted of (1) the older, obligatory but necessary, study of occupational diseases (Industrial Hygiene Unit) too late to protect workers' health; (2) the newer, inadequate preventive studies (Occupational Health Section) of occupational (job-created) health hazards so as to eliminate or reduce them; and (3) the most recent, health protection against ionizing radiation (State Radiation Protection Program). These programs, reported separately, have required differing professional, scientific, and statutory attention to (1) the work environments, and (2) the employees themselves.

Seventy-three per cent of all occupational health study visits made in 1961 solely to dusty trades (less than 300 plants) deteriorated to 81 per cent in this biennium. Assisted by three man-year services of two Public

Health Service assignees, only 19 per cent staff capability remained to serve over 99.9 per cent of all employees!

Deficiencies have been: (1) Uncertain legislative intent; (2) Administrative; and (3) Personnel policy. By 1963, the legislative problems have been well clarified by the last four General Assemblies. The administrative problems have been sufficiently minimized by (1) Reporting the deficiencies during this biennium to the State Board of Health and State Health Director; (2) A December 1962 approved Procedural Guide for the Advisory Medical Committee of the Industrial Commission; (3) An April 1964 delineation of the three programs detailing statutory duties, activities, published guidance, personnel position assignments; (4) An April 1964 State Health Director's order re-defining pertinent organization; (5) The 1964 designation of the dusty trades by the Industrial Commission in statutory manner.

Personnel deficiencies continued. One authorized Industrial Hygiene Engineer resigned and his position remained vacant 13 of the 24 months. His replacement, retaining five others presently employed, and filling three other authorized but vacant positions, has been made difficult by outdated position descriptions containing downgraded performance standards and salaries considerably lower than those of comparable personnel in and outside North Carolina.

On the brighter side, with personnel deficiencies corrected, improved future performance can be anticipated due to (1) Improved administrative direction made possible by related assignments and helpful professional organization memberships of key personnel; (2) Staff loyalty and willingness to perform, unusually well, extensive overtime work; (3) Voluntary contributory assistance by others at no expense to the State; (4) Continually improving staff qualifications acquired by currently attending many scheduled training courses, annual professional conferences, and scientific conventions; (5) Consultants' assistance, and (6) Improved, modern new equipment.

Qualitatively, there has been no change of directing activities listed in the 39th Biennial Report, pages 78-81, Occupational Health Section and State Radiological Health Program. The full-time staff comprise the Program Director and one stenographer, to direct all activities. By his independent actions, 1962-1964, the Program Director guided to North Carolina educational, research, and operational agencies more than \$500,000 of Federal funds not otherwise available. He and staff colleagues have held significant professional assignments, appointments, committee memberships in numerous governmental and organizational groups which have brought untold benefits to the State and to these three programs. In return, 12 State, six University, four Federal, three quasi-official agencies have been served to their satisfaction.

Immense challenges await the recognition which must be given to these programs, for which there are ever-increasing public demands.

OCCUPATIONAL DISEASE/HEALTH PROTECTION STUDIES					
Activity	Total	Dusty Trades(a)	Non-Dusty Trades(b)	Local Health Departments	Others
Engineering Surveys	568	444	103	15	6
Field Determinations	623	146	477	—	—
Laboratory Samples	1,892	1,643	249	—	—
Medical Visits/Assistance	118	12	38	26	42
Chest X-ray Films Made	25,988	13,386	12,602	—	—
(Number of Plants)	(444)	(387)	(57)	—	—
Chest X-Ray Films from Other Sources	1,282	—	—	—	—
Total Chest X-Ray Films Interpreted	27,270	—	—	—	—
Follow-Up Studies	(753)	(131)	(622)	—	—
Sanatoria Studies	131	131	—	—	—
Personal Physicians	622	—	622	—	—
X-Ray Film Pathology Reported	(260)	(91)	(169)	—	—
New Silicosis (Stage I)	16	16	—	—	—
New Asbestosis (Stage I)	3	3	—	—	—
Actual/Suspected Tuberculosis	61	5	56	—	—
Health	128	49	79	—	—
Pneumonitis	6	6	—	—	—
Tumor	6	6	—	—	—
Emphysema	3	3	—	—	—
Other	37	3	34	—	—
Work Cards Issued	13,459	13,459	—	—	—
Advisory Medical Committee Reports to Industrial Commission	57	57	—	—	—
Medical Case Histories	9	9	—	—	—
Case Hearings—Compensation Claims	35	35	—	—	—
Court Hearings Attended	6	6	—	—	—
Notes: (a) Industrial Hygiene Unit					
(b) Occupational Health Section					

### State Radiation Protection Program

This program of only four and one-half years has progressed in the orderly manner defined in the 39th Biennial Report, which needs re-reading to appreciate the progress made. No event could confirm public need for this program more than the 1962 Cuban Crisis, on top of significant fall-out recorded in other areas. Amendment of G. S. 104C (1963, c. 1211) now has provided statutory basis for effective protection, which, beginning with this biennium, has been financed 50 per cent by Federal funds matched by the State.

Administration of the program in this biennium has provided functional, trained, and equipped staff; consultations and advice; statutory establishment of reasonable standards, enforceable by effective licensing, registration, regulatory control; provisions for occupational and environmental surveillance; readiness for radiological emergency; laboratory services supporting all. The Program Director more successfully seeks the extensive coordination required by statute because of his appointments also to be Chief, State Radiological Emergency Team; Secretary and statutory public health physician member of the North Carolina Atomic Energy Advisory Committee and its Radiation Standards Subcommittee; Chief, Radiological Defense Service, State Civil Defense Agency.

Fourteen full-time positions, three vacant under current State personnel policy, are supported by 23 other staff members' part-time attention. The program's Health Physicist joined the Section August 1, 1962. If consistently available, no more than these 14 personnel will be required ex-

cept for serious emergency conditions, or program change impossible to anticipate now as likely to be necessary.

During the biennium, nine staff members have attended 28 scheduled training courses of one week to three months duration, so that 16 now have completed 51 courses at U. S. Public Health Service, Atomic Energy Commission, and our own universities' Institutes. Concurrently, the staff has taught 48 State and local personnel in the North Carolina Institute in Fundamentals of Radiation and Radiological Protection; assisted in teaching 21 graduate students at the University of North Carolina School of Public Health; trained two U. S. Public Health Service assignees in administration of occupational radiation surveillance.

Twenty pertinent informational bulletins have been distributed to local health departments; four of their nurses and seven of their directors have been sponsored for one week Public Health Service training courses. Six advisory bulletins have been distributed to physicians, dentists, veterinarians and hospitals detailing office protection practices, film badge/dosimeter services, health physics consultant/survey services, x-ray survey work sheets, decontamination services. The exhibit RADIATION AND HEALTH has been displayed at Trade, State and Health Fairs. The Program's Health Physicist has furnished 65 consultations and designed and guided establishment of a high-level instrument calibration facility. Approximately \$150,000 worth of equipment is now available for survey and instrumentation; environmental sampling; laboratory counting and chemical and toxicological analyses; testing, repairing, and calibrating all of these.

Systematic procedure has provided sound protection standards; a system of licensing or registration and regulatory control compatible with Federal and other States' systems is functional; North Carolina Regulations for Protection Against Radiation were prepared as approved by the Governor June 26, 1963, were adopted by the Board January 9, 1964, to be effective August 1, 1964. Twenty-one highly qualified consultants have accepted responsibilities to the program, including a Medical Isotopes Advisory Group.

A proposal prepared for Governor Terry Sanford to send to the Chairman, U. S. Atomic Energy Commission was forwarded May 15, 1964, certifying the State ready to accept from the Commission certain activities defined in Section 274, Atomic Energy Act of 1954, as amended. Its effective date will be August 1, 1964, with the agreement to be signed in July 1964.

Occupational surveillance over radiation sources has developed slowly. Surveys/inspections were made of 108 x-ray machines, 53 civil defense training Cobalt 60 source sets, 47 AEC licensees, two radium sources. The Dental Sur-Pak program was completed. With 90 per cent of the State's 1,462 dentists participating, 1,052 of 1,315 x-ray machines' deficiencies were correctible readily by collimators and filters furnished free for the purpose.

Environmental surveillance is on a practical and technically authoritative basis. The State continued its participation in the U. S. Public Health Service air, milk and water surveillance network programs. The State's

independent program continued the regular checking of 120 community water supplies, and added precipitation, well waters, air and milk sampling. Air is sampled periodically at seven stations. Jointly with the U. S. Weather Bureau stations, State equipment continuously monitors air at Charlotte and Raleigh-Durham Airports. Milk and food sampling is well begun.

In addition to detailed Handbook revision and regularly scheduled equipment check and maintenance, the State Radiological Emergency Team has offered its services to the State's civilian airport managers to help effectiveness of the Federal Aviation Agency's 1963 program RADIATION SAFETY FOR CIVIL AIRPORTS (FAA Advisory Circular AC: 150/5240-6). A list of most of the radiation sources in North Carolina was distributed to local health directors, airport managers, civil defense and law enforcement authorities, fire prevention and fire fighting services, professional, safety, insurance and other related personnel.

The Laboratory services, fully functional now, provide counting and analytical assay, utilizing an Automatic Proportional Counting System, Single-Channel Gamma-Spectrometry System, Multi-Channel Gamma-Spectrometry System and Alpha-Spectroscopy System, Liquid Scintillation Spectrometry System, Large Area Gas Proportional Counting System, two Automatic Low Level Beta Counting Systems, Automatic Flow Counter System, Gas Chromatography System, Spectrophotometry System; and other essential equipment for chemical and radio-chemical work.

As Secretary of the North Carolina Atomic Energy Advisory Committee, the Program Director has maintained all Committee records and files, prepared the Committee's Annual Report to the Governor, furnished minutes for all Committee and Sub-committee meetings. As Chief of the State Civil Defense Agency Radiological Defense Service, he assisted in program analysis and revision; secured three Area Radiological Defense Service Chiefs and oriented them; obtained funds for and assisted in restoring functional status to 80 per cent of the State's monitoring equipment; helped reorganize the staff and operational organization; and directed the Radiological Defense Service in two Headquarters exercises as part of a national test.

### Occupational Health Protection

Seven full-time staff, counting three authorized but vacant positions, comprise two engineers, three technical associates and two clerical members, to maintain the health surveillance over all but some 300 dusty trades' work environments of the State. This includes surveillance over 2,200 x-ray machines and all radioactive materials in work areas of the State. One physician, two engineers, one technical associate, and one clerical member, when available, comprise part-time staff to assist but only by diversion from other statutory primary duties. Three scheduled occupational health and seven radiation technical training courses were attended by the full-time staff. New equipment worth \$1,750.00 has been added.

The numbers of studies made, plant work environment (engineer) and employee medical (chest film), are reported elsewhere. Closer relation-



ships were sponsored in 23 counties between managements, health directors, and local medical societies, coordinated with the State's medical and dental societies. Two new advisory bulletins were published and distributed. Twenty-one bulletins of guidance were distributed to local health directors. Special studies begun or made have included anthrax, asbestosis, pulmonary emphysema, occupational health services needed by State employees, physical health evaluation of the State's physicians, 116 services of the State Board of Health available to industry now, and an outstanding North Carolina plant medical service recommended for national recognition and award. In addition, the occupational health effectiveness of environmental surveillance over work areas and medical surveillance over employees, as measured by disease incidence where there are and are not health protective measures, is related under the Industrial Hygiene Unit report.

There has been no occupational anthrax in the plants we have surveyed. Other plants reportedly have been less fortunate.

With financial and staff assistance given by the U. S. Public Health Service, a long-term scientific study of five asbestos plant work environments and of the employees' personal health has been jointly begun. It will be followed many years hence, cooperatively, with assistance from our State's five asbestos plants' managements.

Whether occupations cause alarmingly increasing pulmonary emphysema deaths is under consideration. In a study covering 14 years, resident emphysema deaths have increased from 16 to 254. They have doubled in four years, and are three times as high in six, four times in eight, five times in ten, eight times in 12, eleven times in 13, and 16 times as high in 14 years. In cooperation with the Medical Society of the State of North Carolina, a uniform study of the individual physical condition of the State's physicians, and a group analysis, is under way to determine what occupational aspects may be revealed.

The staff has taught (96 hours) administrative and scientific aspects of occupational health to 74 graduate and 33 medical students at the University of North Carolina Schools of Public Health and Medicine, respectively; jointly designed and participated in annual Industrial Ventilation Conferences at North Carolina State of the University of North Carolina (1964 Conference attended by 77 plant engineers); presented health protection measures to the Annual North Carolina Fertilizer Manufacturers' Safety Conference; helped design annual programs for the North Carolina Governor's Conferences on Occupational Health, the years' business programs of the Governor's Council on Occupational Health, and served as secretariat and disbursement agent for the Council. The Program Director is serving actively as member of the new State Pesticides Advisory Committee of the Department of Agriculture.

Informed, critical attention to all past biennial summations is even more essential now than ever before, as stated in 1960: "Certain industrial noises, ionizing radiation, chemical intoxications, can be expected to create new and more hazards. Increasing industrialization creates not only more volume of but more varied responsibilities, more demands for field visits and recommendations to employers. We can meet the challenges by increased study, research, training of our personnel, and by cooperation

with Federal and our other State agencies and with our privately practicing professions, given the means to do so." It means profits to our citizens only if we do.

### Industrial Hygiene Unit

This Board unit has served the North Carolina Industrial Commission 30 years, by (1) studying the compensable occupational diseases of the dusty trades, asbestosis and silicosis; (2) making and comparing annual chest x-ray films of dusty trades' employees through use of the Unit's mobile x-ray equipment (bus); (3) studying the dusty trades' work environments to determine the nature and extent of occupational hazards there, and recommending to employers healthful standards and methods for preventive elimination or control of such hazards; (4) permanently maintaining the pertinent State records, reports and x-ray films. Of these four statutory duties, only the third listed is preventive; the other three are documenting preventable diseases for which employers have paid, unnecessarily, inestimable amounts in compensation, medical costs, higher insurance costs, and lost production by their older, most experienced, and best trained employees. Therefore, except for the third, the listed duties merely measure the effects of insufficient public health practice. The third permits timely and profitable protection of employees' health.

In this biennium, for the first time the Industrial Hygiene Unit has a procedural guide and a list of dusty trades designated in statutory manner. The marked advances likely are indicated: (1) An employer would not be compelled to comply with certain statutory requirements until his industry is designated a dusty trade by the Industrial Commission; (2) The Commission's Procedural Guide pertains only to designated dusty trades; (3) A special study shows that North Carolina dusty trades employers who have controlled dusts in their work environments deserve employee and community thanks; (4) Immeasurable economic benefits have come slowly but surely with effective preventive medical practices.

A program effectiveness study covers the past 29 years. For the first time, in 1962, then again in 1963 and 1964, only Grade I new silicosis cases, 13, 8 and 3 (half year), respectively, were initially diagnosed among current employees; only four new Grade I asbestosis cases were found in 1962, none in 1963 and 1964. More advanced Grade II and III cases of both diseases were found previously back to 1935. This seems to indicate program effectiveness in these two occupational diseases.

A statistical indication that the dusty trades preventive program must continue is found in its effectiveness:

## Newly Diagnosed Cases of Silicosis and Asbestosis

Calendar Years	Ratio Numbers Diagnosed/Number Employees Examined (Annual Average)	
	Silicosis	Asbestosis
1935-1937	1/44	1/100
1938-1943	1/100	1/219
1944-1949	1/115	1/383
1950-1955	1/125	1/3764
1956-1961	1/411	1/4006
1962	1/523	1/1696*
1963	1/787	1/6296
TOTAL 29 years	1/183	1/682

\* Includes three long-suspected cases.

Of the total \$2,914,462.00 occupational injury "penalties" to employers in North Carolina, 65 per cent went for asbestosis and silicosis, exclusive of insuring costs and lost production by their employees. The total medical costs were only 17.8 per cent, Workmen's Compensation 82.2 per cent, of the total dollar reimbursements made by employers. Seventy-nine per cent of all compensation paid for preventable occupational diseases went for silicosis and asbestosis. For treatment, AFTER DISEASE DEVELOPED, only 8.7 per cent of the total medical costs went for these diseases. Since silicosis is the worst single compensation problem of North Carolina employers, it deserves a bit more analysis. One of our dusty trades employees had only 5.5 per cent as much chance of initial diagnosis of silicosis in 1963, 8.4 per cent in 1962, and 10 per cent annually 1952-1961, as he had in 1935. This illustrates how essential it is to extend occupational disease PREVENTION to all other occupational hazards as well as dusts, as intended by the General Assembly seven years ago.

Not enough past attention has been given by the Board to help employers reduce their annually increasing average payments for medical costs for all occupational diseases. Stated another way, only 16 per cent of the total medical costs during 28 years were paid 1935-1947, the first 13 years. Thirty-four per cent of the total was paid in the next eight years to 1955; 50 per cent of the total was paid in the remaining seven years to 1962! So, the annual average medical costs have been going up consistently; since 1955, have doubled those for the whole 28-year annual average cost. This is mostly preventable and is paid for all other occupational diseases far more than for silicosis and asbestosis. But only silicosis and asbestosis can have any consistent public health attention up to now. Considerably more occupational health studies and recommendations are required. Occupational diseases and medical costs would drop.

## Biennial Report

# LABORATORY DIVISION

July 1, 1962-June 30, 1964

The Laboratory Division of the State Board of Health, established by an Act of the State Legislature in 1905 to examine samples of water from public water supplies, has continued this service at an ever increasing rate. From this beginning, services have been added by Acts of the Legislature or by the North Carolina State Board of Health whenever there was indication of need in the protection of the health of the citizens of North Carolina. Today the Laboratory serves the State of North Carolina in the fields of chemistry, cytology, environmental health, chronic diseases and infectious diseases. The Laboratory Division is constantly seeking to train personnel in new procedures in the field of Public Health in order to assume responsibilities when called upon by the physicians, hospitals, local health departments and State institutions.

During the past biennium 1,135,127 examinations were made; an increase of 110,428.

From the tabulation of specimens examined during the biennium, problems and advancements in public health may be noted.

### STAFF

At the end of the biennium, the staff of the Laboratory Division consisted of the following 92 budgeted positions: 1 Laboratory Director, 23 bacteriologists, 7 chemists, 28 technicians, 29 administrative and clerical personnel, 1 farm supervisor and 3 farm hands.

### CHEMISTRY

The Chemistry Group performed 29,352 examinations during the biennium as compared with 19,229 in 1960-62. The accelerated program in air pollution included the addition of dustfall samples, precipitation (rain), and assisting the Sanitary Engineering Division in field studies. Also, considerable work has been done on methods and instruments in preparation for a full program in radio-chemical analyses on foods, water and milk.

Under a Public Health Service Contract, the Chemistry Laboratory participated in a study designed to determine the levels of trace elements: Vanadium, Magnesium and Manganese in samples of finished potable water from each county in North Carolina. These data were to be used in conjunction with available atherosclerotic cardiovascular disease mortality data from North Carolina in an effort to determine whether or not any correlation exists between the relative levels of trace elements in drinking water and the frequency of atherosclerotic cardiovascular deaths in North Carolina.

### CANCER CYTOLOGY

The Cancer Cytology Group has examined 109,031 smears for cancer; an increase of approximately 27,000 over the previous biennium. The de-

mand for cytological examinations is constantly increasing and, in our opinion, making the service available to indigent patients continues to be one of our greatest needs in preventive medicine. The Laboratory is fortunate in that we have trained personnel in this group which has enabled us to increase our services.

### ENVIRONMENTAL HEALTH (Water Bacteriology, Dust, Shellfish)

**Water Laboratory**—The number of public and private water supplies continues to increase. During the biennium 113,775 sanitary analyses were made on water samples as compared with 83,136 during 1960-62. An increase is noted in the number of residential subdivisions listed as public supplies, as well as in other housing developments which increased the number of private supplies. This trend is expected to continue. The use of State-owned recreational facilities by the traveling public has necessitated the placing of many state parks and roadside rest areas on our list for monthly water analyses.

**The Shellfish Laboratory**, located in Morehead City, has continued to operate with one bacteriologist. There has been a continued increase in the number of examinations made on seafoods and water from oyster beds for determining pollution or contamination. There were 5,610 examinations made during the biennium as compared with 4,823 in the previous period.

**Dust**—One thousand, nine hundred thirty-six (1,936) atmospheric samples were examined for dust content as an aid for combatting health hazards in dusty trades. (Samples collected and submitted through Occupational Health Section)

### INFECTIOUS DISEASES

Our Infectious Disease Units: Microscopy (Tuberculosis and Parasitology Unit), Bacteriology, Streptococcus, Syphilis Serology, and Virology, provide service for the identification of all bacterial, parasitological, Rickettsial and Virological agents by isolation, microscopic and serologic procedures where standard methods are available.

**Microscopy (Tuberculosis and Parasitology Unit)**—During the biennium a new program in tuberculosis work was inaugurated by which greater service is being offered to the people of North Carolina. This was made possible by a Public Health Service Tuberculosis Control Project Grant. All specimens received for tuberculosis examinations are being cultured and organisms identified. During the biennium 49,981 examinations were made with a total of 1,264 positive findings.

Intestinal parasites showed an increase in the number of specimens received with 43,837 examinations performed as compared with 41,151 in 1960-62.

**Bacteriology Unit**—An increase in fecal specimens for the isolation and identification of enteric pathogens (*Salmonella-Shigella*) is noted, however, due to a change in our method of recording results this does not show in our tabulation. There are now so many recognized members of this group that it is no longer practical to count as examinations individual

members but instead we only count examinations for the whole group and record separate individual isolations as positive examinations. This work is no longer seasonal, but a heavy volume is constant.

**Streptococcus Unit**—Work in this Unit has been constantly increasing since the introduction of the Fluorescent Antibody Test in 1960. During the period 43,152 throat cultures were made. During the biennium the Streptococcus Unit participated in the Heart Disease Control Program under two Contracts: (1) "To investigate the reproducibility of the Conventional Culture Method which has been used as the qualitative standard for evaluating results of the fluorescent antibody," and (2) "A study to determine the feasibility of reducing the laboratory time involved in the examination of throat swabs for Group A. Streptococcus."

Phage typing of Staphylococci has been discontinued, which accounts for the decrease in Staphylococcus examinations.

**Syphilis Serology** has continued to be a major activity, 622,736 examinations being made during the biennium. Routine tests performed were the Venereal Disease Research Laboratory (VDRL), Kolmer Reiter Protein (KRP), Fluorescent Treponema Antibody (FTA), Darkfield Microscopic test for Treponema Pallidum, and Total Protein Determinations. In our Serology Group, 40,940 serum specimens were prepared and packaged for evaluating syphilis serology in laboratories participating in our Approval Programs under the North Carolina Marriage Law.

**Viral and Rickettsial Unit**—During the period new procedures introduced in this group were: (1) fluorescent antibody techniques for the identification of rabies virus, and (2) some progress has been made toward the manufacture of certain Viral and Rickettsial reagents. Special serology assigned to this group includes serology for fungus, toxoplasma, and leptospiral diseases. These special studies were formerly done by the Serology Group.

There was an increase in the number of positive rabies examinations which was a result of the influx of migratory bats believed to be passing through the State. Of the nineteen (19) positive findings, there were eight (8) bats, ten (10) foxes, and one (1) dog.

## LABORATORY APPROVAL AND CERTIFICATION

During 1963 our Laboratory Approval and Certification Programs were placed under the responsibility of one Unit. This resulted from the resignation of the employee responsible for the Laboratory Approval Program (under the North Carolina Marriage Law), and the retirement and death of the staff member performing the duties of Survey Officer under the Milk and Water Laboratories Certification Program.

There are 200 Serology Laboratories operated in North Carolina which have been approved for the performance of serological tests for syphilis under the State Marriage Law. This service requires at least one annual inspection by a representative of the Laboratory for the purpose of surveying the physical aspects of the laboratory. Evaluation of performance is checked throughout the year by having each laboratory perform tests on 100 unknown specimens, sent in groups of 10. These results are reported to and checked by the Laboratory Division.

At the end of the biennium there were 34 milk laboratories certified to make bacterial analysis of milk used in interstate shipment. These laboratories are also inspected annually. Evaluation of performance is determined from the results reported from tests run on split samples which are sent twice a year to each laboratory.

Water Laboratories are certified to perform bacterial analysis of drinking water used on common carriers engaged in interstate traffic. An annual survey is made of the laboratory facilities and equipment. To date ten water plant laboratories have been certified for this purpose.

## LABORATORY FARM

The Laboratory Farm continues to produce small animals used in the Laboratory. Since commercial markets cannot be relied upon for a uniform source of laboratory animals, it is necessary that we continue the production of animals to assure a source of disease free animals which are a necessity in the operation of our Virus Laboratory. Also, we have continued to supply sheep blood to Rex Hospital, Wake Memorial Hospital, in Raleigh, and to any other users of sheep blood in Raleigh and vicinity, in addition to supplying our own needs for sheep blood.

## SPECIAL SERVICES

The Laboratory Division has continued to offer assistance to other agencies, State and Federal, though much of the work performed is for local health departments and private physicians. These services include assistance in the study of epidemics and investigation of food poisoning outbreaks. Additional service is rendered on laboratory problems in environment sanitation whenever the need demands, as well as in the design and equipment of laboratories when requested.

During the biennium the Laboratory Division prepared and distributed a bulletin outlining the services available with directions for collecting and submitting the various types of specimens.

## TRAINING

During the biennium, members of our staff continued to improve their technical and administrative knowledge by attending 28 courses given at the Communicable Disease Center, Atlanta; the Robert A. Taft Engineering Center, Cincinnati; and Fort McClellan, Alabama. Members of the staff also attended conferences, symposiums, seminars and meetings on special studies and problems, and participated in various workshops in an effort to continually develop and apply new methods to increase the effectiveness of our public health program in the control of diseases.

The Laboratory Division assists in training technicians, bacteriologists and chemists from local health departments, hospitals, water plant laboratories and private laboratories. To train other laboratory workers our employees must be kept mentally alert and aware of new laboratory procedures and methods. One T.B. Workshop in Laboratory Methods and two Darkfield Workshops in Syphilis Identification were held during the past two years.

## BIOLOGICALS

The distribution of biological products and supplies and specimen outfits continues to be an important activity. These supplies are purchased by local health departments, hospitals, physicians and other State institutions.

Typhoid and smallpox vaccines are distributed without charge.

Under the State-Provided Plan, the Laboratory distributed 647,937 cc Poliomyelitis Vaccine for indigent children between the ages of two months and six years. Funds for this vaccine were made available from Contingency and Emergency.

The American National Red Cross has continued to supply gamma globulin (22,256 cc annually) without charge. The Laboratory distributes the gamma globulin through the local health departments in accordance with State Board of Health policy of limiting the use of this product to the control of Infectious Hepatitis and Measles in children.

## FINANCIAL

It may be noted from the financial statement that there was an increase in receipts for the biennium. This was due in part to an increase in the price of specimen containers and biologicals distributed which became effective in April, 1963.

The close of the biennium reflects continued progress in our efforts to render a greater service to the citizens of North Carolina. The support and cooperation of other Divisions has contributed much to the accomplishments made in our public health laboratory program.

Again, too much cannot be said in praise of our loyal and devoted staff, especially for the older members who form the experienced cadre that enables us to continue to assist the State Board of Health in the control of disease in North Carolina.

## REPORT OF EXAMINATIONS MADE

July 1, 1962 - June 30, 1964

	July 1, 1962-June 30, 1964		July, 1 1960
	Positives	Total	June 30, 1962 Total
<b>CHEMISTRY</b>		29,352	19,229
Occupational Health	387		
Sanitary Engineering			
Air Pollution	3,327		
Water & Sand	21,900		
Water	1,369		
Other			
Chronic Disease	2,111		
Miscellaneous	258		
<b>CANCER CYTOLOGY</b>		109,031	82,099
Cervical	106,458	1,225	
Sputum	1,546	132	
Breast	141	7	
Other	170	34	
Unsatisfactory	716		



	July 1, 1962-June 30, 1964		June 30, 1962
	Positives	Total	July 1, 1960
<b>ENVIRONMENTAL HEALTH</b>			
Water Bacteriology .....	6,814	113,775	83,136
Shellfish .....		5,610	4,823
Dust (Occupational Health) .....		1,936	2,066
Food .....		20	60
<b>INFECTIOUS DISEASES</b>			
<b>Bacterial</b>			
Vincent's Angina .....	55	210	358
Tuberculosis .....		49,981	40,662
Culture .....	566	82	
Microscopis .....	28,646	704	
Animal Inoculation .....	20,769	478	
Gonorrhoeae .....		5,388	5,280
Microscopic .....	5,212	840	
Special Studies .....	176		
Diphtheria .....	52	809	1,307
Staphylococcus .....		2,799	12,792
Microscopic (Sputum) .....	517	511	
Culture (Other sources) .....		1,196	
Coagulase .....	588		
Phage Typing .....	1,744		
Special .....		1,800	
Streptococcus .....		46,943	21,311
Microscopic (Sputum) .....	734	717	
Culture .....			
Throat .....	43,152	10,694	
Other Sources .....		915	
Anti Streptolysin O .....	2,559	1,834	
C. Reactive Protein .....	498	112	
Miscellaneous Cultures .....		7,942	7,560
Beta Streptococcus (See Strep.) .....			
Non-Hemolytic Strep. (See Strep.) .....			
Streptococcus Viridans (See Strep.) .....			
Coagulase Pos. Staphylococcus			
(See Staphylococcus)			
Coli Form Bacteria .....	1,126		
Klebsiella Sp. ....	200		
Pseudomonas Sp. ....	430		
Proteus Sp. ....	407		
Salmonella Typhi (Typhoid) .....	10		
Other Salmonella .....	134		
H. Influenza .....	9		
Miscellaneous .....	124		
Miscellaneous Bacteria .....		7,642	927
Syphilis Serology .....		622,736	593,715
VDRL Slide Qualitative .....	585,415		
VDRL Slide Quantitative .....	24,591		
Spinal Fluid (VDRL) .....	2,390		
Total Protein .....	1,414		
Darkfield .....	17		
FTA Methods .....	3,800		
KRP Complement Filxation .....	5,109		
Agglutination Tests .....		13,144	6,630
Heterophile Antibody Tests .....	813		
Brucellosis .....	26		
Tularemia .....	15		
Proteus OX 19 .....	16		
Proteus OX 2 .....	1		
Proteus OX K .....	0		
Typhoid O & H .....	9		
Enteric Cultures .....		16,974	40,474
Salmonella Typhi (Typhoid) .....	169		
Other Salmonella .....	641		
Shigella .....	479		
<b>Mycotic</b>			
Cultures .....	467	2,955	2,390
Candida (Monilia) Albicans .....		105	
Trichophyton .....		35	
Miscellaneous .....		14	
Serology .....	2,070		
Blastomyces .....		14	
Histoplasma .....		32	
Neisseria Gonorrhoeae (G.C.) .....		7	
Yeast-like Fungi (Micros.) .....	418	406	

	July 1, 1962-June 30, 1964		July 1, 1960
	Positives	Total	Total
Parasitic			
Intestinal Parasites .....		43,837	41,151
Amobae .....	1,901		
Culture .....			
Microscopic .....			
Tapeworm .....	4		
Microscopic .....			
Roundworm .....	3,714		
Microscopic .....			
Malaria .....		81	92
Toxoplasma .....	580	1,574	983
Occult Blood .....	468	1,205	560
Cysts .....			1,882
Miscellaneous .....			259
Viral and Rickettsial .....		45,657	52,252
Serology .....			
Culture .....			
RABIES .....	19	2,773	2,683
Microscopic .....			
Animal Inoculation .....			
Special			
Miscellaneous .....		21	18
Special Studies (Leptospirosis) .....	57	2,732	
		1,135,127	1,024,699

**BIOLOGICALS DISTRIBUTED—LABORATORY DIVISION,  
STATE BOARD OF HEALTH**

	July 1, 1962 June 30, 1964	July 1, 1960 June 30, 1962
Typhoid Vaccine cc. (9,332-20cc Vials) .....	186,640	194,300
Smallpox Vaccine (Tubes) .....	331,429	326,076
Poliomyelitis Vaccine (Sold) 9cc Vials .....	6,868	9,081
*(Free) 9cc Vials .....	65,125	79,508
Rabies Treatments .....	229	217
**Gamma Globulin cc (15,930-2cc) .....	31,860	30,364
Toxoids (injections) .....	415,952.5	423,477.5
Tetanus .....	69,190	
Diphtheria Tetanus .....	63,300	
Triple Antigen .....	283,462.5	
Pertussis Vaccine .....	0	12
Diphtheria Antitoxin—		
55—10,000 Units .....	4,70	8,330
186—20,000 Units .....		
Tetanus Antitoxin—		
2,819— 1,500 Units .....	7,648.5	9,230
171—20,000 Units .....		
Sheep Cells (cc) .....	70,945	31,840
Schick Tests for Diphtheria .....	9,520	13,150
Dick Test for Scarlet Fever .....	250	520

\* Distributed under the State Provided Program (Emergency and Contingency Funds)

\*\* Furnished to the Laboratory by the American Red Cross and Distributed Free of Charge

## LABORATORY DIVISION STATE BOARD OF HEALTH RECEIPTS

BIOLOGICALS AND PRODUCTS	July 1, 1962 June 30, 1964	July 1, 1960 June 30, 1962
Toxoid .....	\$ 30,842.62	\$ 29,461.01
Pertussis Vaccine .....		6.50
Antirabic Treatments .....	1,753.59	1,062.49
Diphtheria Antitoxin .....	173.98	178.13
Tetanus Antitoxin .....	2,407.53	2,355.05
Dick Tests .....	29.92	48.78
	<u>\$ 35,207.64</u>	<u>\$ 33,111.96</u>
Water Tax .....	\$ 59,111.50	\$ 56,836.25
Specimen Outfits .....	51,957.53	32,211.67
Special Fees .....	1,330.00	882.80
Miscellaneous .....	1,830.19	1,397.14
Animals .....	212.09	720.41
Wool .....	330.48	498.25
Equipment .....	450.81	707.85
Sold 1957 Chevrolet .....	588.01	
Sold 1958 Chevrolet .....		219.19
	<u>TOTAL \$151,018.25</u>	<u>\$126,585.52</u>
REFUNDS	<u>38.70</u>	<u>7.40</u>
	<u>\$150,979.55</u>	<u>\$126,578.12</u>
Financial Statement		
Total Expenditures .....	\$1,188,347.69	\$1,025,474.84
Total Receipts .....	150,979.55	126,578.12

# LOCAL HEALTH DIVISION

## Biennial Report

July 1, 1962-June 30, 1964

**ADMINISTRATIVE SECTION:** At the close of the biennium, of the eight positions in the Administrative Section, all were filled except that of Assistant Director.

The Administrative Section for each year of the biennium 1962-63 and 1963-64 allocated funds by formula and in accordance with the Policies of the North Carolina State Board of Health for Allocation of State Aid Funds to Local Health Departments as follows:

1962-63	Regular State Funds	\$1,490,560.
	State Mental Health funds to 28 Mental Health Clinics	333,409.
	Federal Mental Health Funds	17,461.
	Federal Funds, General Health	\$ 80,000.
	Maternal and Child Health	120,000.
		200,000.
1963-64	Regular State Funds	\$1,527,268.
	Federal Funds, General Health	\$ 80,000.
	Maternal and Child Health	120,000.
		200,000.

Total State and Federal Funds allocated to local health departments for fiscal year 1962-63 were \$2,041,430. Total State and Federal Funds allocated to local health departments for fiscal year 1963-64 were \$1,727,268. Due to the placing of all State and Federal Mental Health Funds in the State Department of Mental Health, the total amount (State and Federal) was substantially reduced in fiscal year 1963-64.

Local funds as indicated in the Local Health Service Budget for the fiscal year 1962-63 were \$7,704,168.00 and for fiscal year 1963-64 were \$7,610,791.00. This total represents an increase of \$1,582,721.00 or approximately 11.5% over the amount for the previous biennium, notwithstanding the fact that some \$687,066.00 in local Mental Health funds for fiscal year 1962-63 were placed in the newly created State Department of Mental Health effective July 1, 1963. At the close of the biennium it is noted that 81.5% of all funds in support of the local health program comes from local sources, 16.4% from State funds and 2.1% from Federal funds.

As of June 30, 1964, there were budgeted in the one hundred counties and two city health departments, a total of 1,322 full time positions. This represents a decrease in personnel over the number employed at the close of the previous biennium (Mental Health personnel transferred). Of the 1,322 full time positions, 57 were health directors, 4 assistant health directors, and 6 dentists. There were 34 directors and supervising public health nurses, 529 staff nurses, 270 sanitarians, engineers, and veterinarians, 5 public health investigators, and 12 health educators. The remaining personnel consisted of 405 clerks, bacteriologists, technicians, laborers, janitors, etc. There were 40 budgeted positions unfilled because of unavailable funds and untrained personnel.

It is noted that the close of the biennium showed 67 local health departments in the state organized as follows:

Single County Units .....	45
District units consisting of two or more counties and one city .....	21
Single City Unit .....	1

During the biennium, the Local Governmental Employees' Retirement Plan continued to grow and as of June 30, 1964, 84 of the 100 counties provide their local health employees with this coverage. The attached pages show pertinent data sheets for the two fiscal years.

**TRAINING:** The State Board of Health, through the Local Health Division, provided training for the following public health personnel during the biennium. Training varied in length from one week to one year or more:

- 5 Public Health Dentists, tuition paid to University of North Carolina
- 5 Health Directors were given orientation at the State Board of Health
- 39 Public Health Nurses, tuition paid University of North Carolina, Duke, State, and East Carolina for Extension Courses
- 35 Public Health Nurses were given a course in "Principles and Practices of Public Health Nursing," and "Public Health Nurse in a Maternal Program."
- 41 Public Health Nurses took five days observation and orientation courses at Dorothea Dix, John Umstead, Broughton, and Cherry Mental Hospitals
- 6 Public Health Nurses completed work toward a degree, tuition paid to University of North Carolina
- 1 Public Health Nurse, given orientation in a local health department
- 5 Laboratory Workers had out-of-state expenses paid for training in special laboratory work
- 29 Sanitarians had four to six week courses in "Principles and Practices of Sanitation" at University of North Carolina
- 26 Sanitarians had a course in Food Sanitation at University of North Carolina
- 38 Sanitarians were given orientation in Local Health Departments
- 18 Sanitarians had short course (five days) in "Epidemiology in Environmental Health" at University of North Carolina
- 36 Clerks from local health departments were given Records Short Course at University of North Carolina and at the State Board of Health

In addition to funds expended for the above training, funds were supplied when possible for public health personnel to attend institutes, conventions, conferences, and workshops.

**RECORDS AND PROCEDURES ANALYSTS:** There are two records and procedures analysts who give consultative service in local health departments over the State. The keeping of good records and reports and the practicing of efficient office procedures are the goals held up before the clerical and professional staffs of all the departments.

As a result of constant efforts toward more efficient office procedures, approximately 67% of the local departments have reorganized their files to some extent toward centralized control of records. In this connection, the retention schedule for records recommended by the Department of Archives and History is being promoted along with the general ideas of evaluating all correspondence, reports, and materials consuming time of personnel and filing space.

Emphasis continued to be put on inservice training for clerical personnel in local health departments and the thirteenth and fourteenth courses were held in February, 1963 and February, 1964. The total number who have attended these courses is now 207, and during the years there have been representatives from Puerto Rico and South Carolina. This course began as a two weeks course, but was shortened to three and one-half days in 1963.

To supplement the subjects not covered in this shorter period, one day workshops have been initiated, and during the biennium, two series have been given across the state. The subjects covered were financial records and reports, personnel procedures, and registration of vital records. It is felt these workshops have been worthwhile as they reach more than the previous two weeks course.

The State-wide Local Records Committee for which the records analysts serve as resource personnel continues to give valuable services to the records program.

Another committee on which the analysts serve has been organized by Central Administration to serve in a similar capacity for record forms used within the agency.

**PUBLIC HEALTH NURSING SECTION:** Twenty-one nursing positions are budgeted by the North Carolina State Board of Health. As of June 30, 1964, 9 of these positions were filled.

The professional staff of the Public Health Nursing Section consists of a chief and assistant chief and four generalized public health nursing consultants. One nursing consultant has been assigned by the U. S. Public Health Service to work in the area of chronic diseases. There are five generalized nursing consultant positions vacant in this section. During the biennium, the chief and two generalized nursing consultants resigned. One generalized nursing consultant retired.

During the biennium, two nurses in the Crippled Children's Section retired. One of these positions has been filled. In the Maternal and Child Health Section, one nurse retired and one nurse resigned. The third position in this section is filled. A new position for a nurse in the mental retardation program is vacant. The nursing position in the Nursing Home Section was filled for one year, but is now vacant. The position for occupational health nursing consultant is vacant. The mental health nurse position was lost when the Mental Health Section of the North Carolina State Board of Health was transferred to the State Department of Mental Health.

During the biennium, the staff of the Public Health Nursing Section made 1,458 visits to local health departments.

Five hundred and sixty-three (563) full time nursing positions are budgeted by local health departments, an increase of one over the last biennium. These include eight directors, 26 supervisors, 520 staff public health nurses and nine clinic nurses. The average ratio of public health nurse to population is 1:8000.

The recruitment of staff nurses academically prepared in public health nursing and of nurses for leadership positions remains a crucial concern.

Although more graduates of collegiate nursing programs are entering public health, the demand for additional public health nursing services necessitates the continued employment in local health departments of nurses who are not prepared in this specialty.

Forty-five per cent of the public health nurses have not completed a program of study in public health nursing, but have completed the equivalent of one or more courses in public health nursing; 25% have not yet completed any courses in public health; 30% have completed an accredited program of study in public health nursing. Staff education activities have concentrated on the orientation of nurses to public health, and nursing services to the sick. Review of growth and development and communication skills has also been emphasized. Nursing personnel of a number of health departments meet monthly for inservice programs. The School of Nursing and the School of Public Health, University of North Carolina, have co-operated with the North Carolina State Board of Health in providing a workshop to orient the nurse who has no academic preparation in public health.

At the present time, 31 health departments formally provide nursing services to the sick in their homes. The number of this type of visits in the state totaled 90,275 in 1963. Twenty-eight health departments provide some nursing services to the mentally ill. This program is receiving less emphasis, however, 17,103 visits were reported during the fiscal year 1962-63. A number of health departments are planning to increase nursing activities in the maternal and child health and in the tuberculosis programs.

To evaluate activities and improve services, the public health nursing consultants have spent time in review and discussion of programs with local health department staffs. Time has been spent also in the development of a guide and manual for use by the public health nurses who are participating in home care programs. Considerable time has gone into review of job descriptions and in attempting to arrive at a more suitable classification plan for public health nurses.

**HEALTH EDUCATION SECTION:** For the solution of many of the public health problems of today and tomorrow, it is necessary that individuals or communities take some positive action. This is different from situations of the past, when a whole community was protected against malaria by the spraying of ponds, or when smallpox was eradicated by widespread vaccination. Public health workers cannot, themselves, protect people from all hazards. Only individual understanding and responsibility can achieve these actions: going to a physician promptly if a danger signal of cancer is discovered; taking a contraceptive pill on schedule; installing and using a seat belt; giving one's child his penicillin every day, year after year; keeping all poisons always out of the reach of children; or voting for fluoridation.

The Health Education Section works with other units of the State Board of Health, with local health departments, and with state-wide organizations which are concerned with health improvement, to interest people in the protection and improvement of individual and community health.

The staff consists of a chief, three consultants, and one secretary. The chief is responsible for administration of the Section. The consultants

serve one-third of the state, each. All the staff work with other Sections of the State Board of Health and with state-wide organizations.

From the start of the health education program, there has been emphasis on local health educators. There are now fifteen positions for such personnel in ten health departments. Three of these were vacant on June 30, 1964. For the biennium, Wake County has had the services of a health educator assigned there by the Public Health Service Heart Program, but this program is terminating. The Section assists local health educators by regular consultation visits (96 during the period) and by semiannual staff conferences. To interpret the functions of local health educators the Section arranged for a presentation to local health directors at a conference and published a collection of "case studies" from the health educators which was sent to local health directors. For the summer of 1963, three student positions were opened for health education aides who assisted trained health educators and were introduced to the profession of health education.

Every health department has the responsibility for carrying on a health education program. Health Education Consultants answer requests for assistance. Among the topics local health departments have emphasized are: school health, including preschool conferences, meetings with school and health department personnel, meeting with health teachers, family life education, VD education, a project in health of high school students in Rutherford County, and an extension course in health for teachers in Buncombe County; home care programs; chest x-ray surveys; migrant worker health; food service education; and weight control. Staff members worked with inservice education activities of public health nurses. Three hundred and twelve visits were made to health departments without a health educator.

The Section had the opportunity of working with many units of the State Board of Health. Among activities were: Staff members prepared a booklet on the State Board of Health and almost completed one on services of local health departments; helped with a recruitment leaflet for sanitarians; held one brief conference on radiological health education; took part actively in the development of a program of migrant health; assisted with family life education in conjunction with the Maternal and Child Health Section; took part at every stage of the 1963 Workshop for State Board of Health Professional Personnel; conferred on nutrition; helped conduct a workshop for public health nurses in family life education; gave consultation on aspects of the oral cancer detection project, oral hygiene education, the immunization program, neurological and sensory diseases, home care, and the epilepsy program.

A number of organizations in the state are interested in health. By working with them, the Section has promoted health careers, alcohol education, mental health, parent and family life education, planning for care of chronic illness, tetanus immunization, tuberculosis education, and information on resources in western North Carolina and state-wide resources in family life education.

Needs for the future include the securing of health educators to fill three local positions and three positions at the State Board of Health,



securing funds for health educators to be assigned to Public Health Districts, the provision of better means of planning for education for the programs of the State Board of Health, and improved methods of working with local health directors in the planning of their educational activities.

**MENTAL HEALTH SECTION:** During the first year of the biennium the community mental health program continued to develop. Mental health clinics were established in Lee and Moore counties. Smaller community consultation and treatment programs were initiated in Craven, Davidson, Johnston, and Martin counties.

The total number of psychiatrists, psychologists and social workers increased with the program expansion. More patients were treated than in any previous year at a slightly reduced cost per interview.

At the end of the first fiscal year of the biennium, when this program was transferred to the new Department of Mental Health, the program had become the largest in the South and was regarded with respect in the national picture.

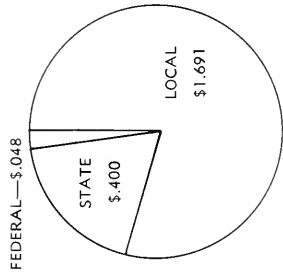
NORTH CAROLINA LOCAL HEALTH SERVICE BUDGET

FISCAL YEAR 1962-1963

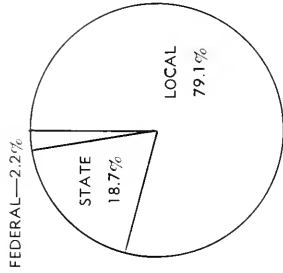
TOTAL STATE FUNDS INCLUDING MENTAL HEALTH (REGULAR \$1,490,560 + \$333,409.26 M.H.)	\$1,823,969.26
TOTAL FEDERAL FUNDS (REGULAR FUNDS \$200,000, MENTAL HEALTH \$17,461)	\$ 217,461.00
TOTAL LOCAL FUNDS	\$7,704,167.97
TOTAL BUDGET LOCAL HEALTH	\$9,745,598.23

POPULATION SERVED 4,556,155  
(1960 Census)

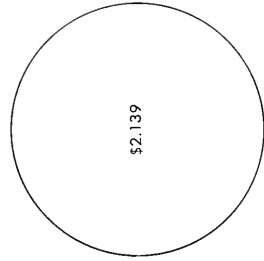
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COST PER CAPITA

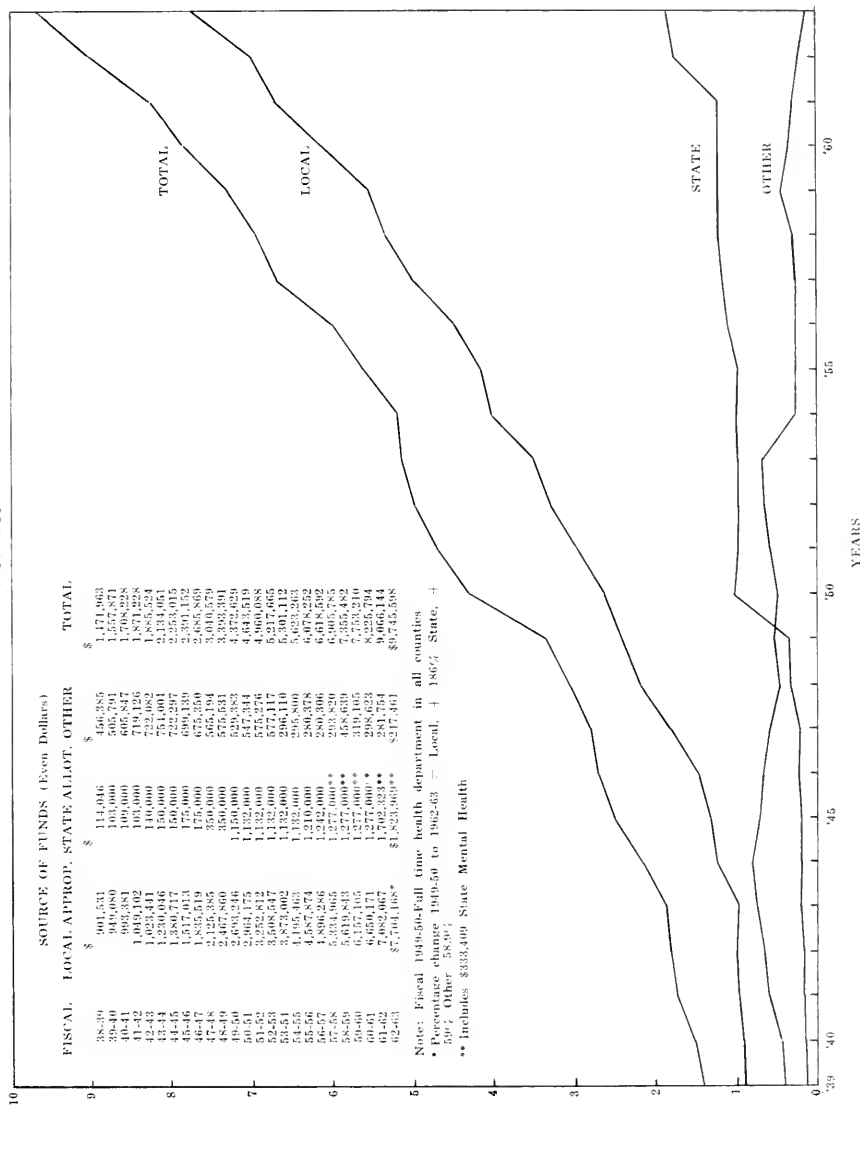


SOURCE OF FUNDS



COST PER CAPITA ALL FUNDS

SOURCE OF FUNDS FOR LOCAL HEALTH DEPARTMENTS IN NORTH CAROLINA  
1939-1963



County, City or District	1960 Population	Date Organized	Total Budget			Source of Funds and Amounts					Part Time	Full Time Personnel (Alert System)									
			Amount	Per Cap.	State Allotment Inc. St. M. H.	Per Cap.	Local Appropriation	Per Cap.	Federal Inc. Fed. M. H. and Other	Per Cap.		H. D.	H. D.	Oth. Med. Dir.	M. H.	P. N.	Sant. N.	Clerks And Others	Deat. Wks.		
Alamance	85,674	1938	\$163,074.00	\$ 1.903	\$ 21,903.00	\$ .256	\$ 138,136.00	\$ 1.612	\$ 3,035	\$ .035	1				12s.	5s.	6ed.	30			
Allegh-Ashe-Watauga	45,031	1938-35	61,884.38	1.441	21,621.00	.480	41,014.38	.911	2,249	.050	1				3	3s.	3	20			
Alleghany	7,734	1938	11,621.17	1.503	4,932.00	.638	6,339.17	.820	350	.045					1	1	1				
Ashe	19,768	1938	22,633.17	1.145	8,407.00	.425	13,207.17	.668	1,019	.052					1	1	1				
Watauga	17,599	1935	22,573.17	1.288	7,354.00	.420	14,339.17	.818	880	.050					1	1	1				
Anson (M.H.)	24,962	1937	70,197.59	2.836	14,032.00	.563	55,156.59	2.210	1,539	.063	1				3	1	2	20			
Avery	12,009	1935	15,112.00	1.258	6,532.00	.344	8,066.00	.667	574	.047		D			1	1	1	6			
Beaufort	36,014	1923	63,657.00	1.767	14,033.00	.390	47,622.00	1.322	1,932	.055					5	3	2	0			
Bertie	24,350	1934	35,876.33	1.473	10,088.00	.314	24,787.33	1.001	1,413	.038	1				1	1	1	20			
Bladen	28,881	1921	50,222.40	1.739	12,486.00	.432	36,047.40	1.248	1,689	.059	1	D			4	2	2	10			
Brunswick	20,278	1949	39,463.00	1.946	9,493.00	.468	28,764.00	1.418	1,206	.060	1				2	1	2	10			
Buncombe (M.H.)	130,074	1913	504,375.00	3.878	69,688.01*	.536	428,396.99	3.294	6,290	.048	1	1			9	18s.	13v.i. 14ed.	52d.			
Burke	52,701	1937	80,817.10	1.534	16,020.00	.304	62,706.10	1.190	2,091	.040	1				3	3	2	20			
Cabarrus (M.H.)	68,137	1919	162,130.97	2.379	27,773.00*	.408	131,463.97	1.929	2,894	.042	1				2	11s.	5	30			
Caldwell	49,552	1937	54,831.00	1.107	16,298.00	.327	36,468.00	.736	2,155	.044	1					2	2	20			
Carteret	30,940	1941	48,846.48	1.579	10,847.00	.351	36,763.48	1.188	1,236	.040	1				3	1	2	10			
Catawba-Lin-Alex	117,680	1938-40-47	205,084.25	1.749	39,442.00	.335	161,553.25	1.374	4,639	.040	1				14s.	8s.	8t.	0			
Catawba	73,191	1938	114,223.00	1.560	19,621.00	.268	91,876.00	1.255	2,726	.037					8	3	6	0			
Lincoln	28,814	1940	47,426.00	1.646	10,025.00	.348	36,170.00	1.255	1,231	.043					3	1	1	0			
Alexander	15,625	1947	27,301.00	1.747	6,955.00	.445	19,614.00	1.255	732	.047					2	1	1	0			
Cherokee-Clay	21,861	1937	39,910.10	1.826	11,821.00	.541	27,048.10	1.237	1,041	.048	1				3	2	2	16			
Cherokee	16,335	1937	21,973.00	1.345	7,378.00	.452	13,821.00	.846	774	.047											
Clay	5,526	1937	9,253.00	1.674	4,480.00	.811	4,506.00	.815	267	.048											
Cleveland (M.H.)	66,048	1938	139,700.00	2.115	32,925.00	.499	103,131.00	1.561	3,644	.055	1				3	5	3	4b.			
Columbus	48,973	1921	70,772.00	1.445	17,403.00	.355	50,614.00	1.034	2,755	.056	1				5	1	3	20			
Graven (M.H.)	58,773	1921	102,258.00	1.740	20,339.00	.346	79,099.00	1.346	2,820	.048	D				5s.	3	5b.	26			
Cumberland (M.H.)	18,418	1919	230,567.81	1.555	51,363.00*	.316	172,355.81	1.161	7,149	.048	1				4	13s.	6t.e.	30			
Currituck	6,601	1938	16,309.36	2.471	4,773.00	.723	11,202.36	1.697	334	.051	1				1		1	6			
Dare	7,935	1937	19,495.27	3.253	4,751.00	.801	14,476.27	2.439	268	.045					2	1	1	6			
Davidson (M.H.)	79,493	1917	109,678.00	1.380	26,405.00	.332	79,840.00	1.005	3,433	.043					7	1	4b.	30			
David-Yadkin	33,532	1938-31	55,956.54	1.491	16,824.00	.425	40,503.54	1.025	1,629	.041	D				4	2	2	20			
Davie	16,728	1938	24,053.00	1.438	6,841.00	.409	16,560.00	.990	652	.039					2	1	1				
Darke	22,804	1931	26,018.00	1.141	8,481.00	.372	16,560.00	.726	977	.043					2	1	1				
Yadkin	22,804	1931	26,018.00	1.141	8,481.00	.372	16,560.00	.726	977	.043					2	1	1				

Duplin	40,270	1934	63,374.41	1,573	15,552.00	.386	45,515.41	1,130	2,307	.057	1	1	13	5	2	2	20
Durham	111,995	1913	383,925.00	3,428	52,409.00*	.468	326,147.00	2,912	5,369	.048	1	1	1	13	19	111	13h.d.
Edgcombe (M.H.)																	52d.
Ex.R.M.	39,401	1919	73,042.00	1,854	17,424.00	.442	53,333.00	1,354	2,285	.058	D			5	2	4	20
Forsyth (M.H.)	189,428	1913	430,701.00	2,274	70,777.00	.374	351,287.00	1,854	8,637	.046	1	1	8	27s.	13l.	15l.b.	d.
Franklin	28,755	1930	44,166.00	1,536	11,237.00	.391	31,283.00	1,088	1,646	.057	D			3	1	2	20
Gaston (M.H.)	127,074	1928	295,501.00	2,325	42,152.00	.332	248,075.00	1,952	5,274	.041	1	1	2	17d.s.	12d.s.	12ed.	30
Graham	6,432	1937	15,141.32	2,354	4,940.00	.768	9,919.32	1,542	282	.044	1			1	1	1	6
Granville	33,110	1919	52,316.01	1,580	11,847.00	.358	38,806.01	1,172	1,663	.050	D			4	1	1	10
Greene	16,741	1937	37,223.74	2,223	8,401.00	.502	27,812.74	1,661	1,010	.060	D			3	1	1	20
Gulford (M.H.)	246,520	1911	788,427.00	3,198	107,122.00*	.434	670,930.00	2,722	10,375	.042	1	1	11	41d.s.	17vt.	26ed.	52d.
Halifax (M.H.)	58,956	1919	145,653.52	2,471	30,485.20*	.517	111,589.32	1,893	3,579	.061	1		11	3	5b.		20
Harnett	48,236	1938	67,714.00	1,404	16,273.00	.337	49,121.00	1,018	2,350	.049	1		2	5s.	1	2	20
Haywood (M.H.)	39,111	1934	81,590.18	2,053	19,471.00*	.490	60,152.18	1,515	1,897	.048	1		2	4	2	3t.	20
Henderson	36,163	1947	62,223.02	1,721	12,042.00	.333	48,732.02	1,348	1,449	.040	1			3	2	2	20
Hertford-Gates	1936-40		55,608.62	1,739	15,224.00	.476	38,568.62	1,208	1,816	.057	1			4	1	2	20
Hertford	31,972	1936	35,028.51	1,542	9,497.00	.418	24,266.51	1,068	1,265	.056				2		1	
Gates	9,254	1940	18,411.30	1,996	5,727.00	.619	12,133.30	1,311	351	.060	1			2		1	
Hoke	16,356	1943	35,703.82	2,183	8,300.00	.507	26,343.82	1,611	1,060	.065	1			2		1	10
Hyde	5,765	1937	14,374.13	2,493	4,893.00	.849	9,150.13	1,587	331	.057		D		5	3	3t.	30
Iredell	62,526	1942	88,050.84	1,408	19,053.00	.305	66,335.84	1,061	2,662	.042	1			3	3	3	30
Jackson-Macon-Swain	41,102	1934	67,282.81	1,637	20,456.00	.498	44,938.81	1,093	1,888	.046	1			1	1	1	
Jackson	17,780	1934	20,903.09	1,175	7,243.00	.407	12,861.09	.723	799	.045				1	1	1	
Macon	14,935	1936	19,400.83	1,299	6,777.00	.454	11,966.83	.801	657	.044				1	1	1	
Swain	8,387	1934	15,597.94	1,860	5,279.00	.629	9,886.94	1,179	432	.052				1	1	1	30
Johnston (M.H.)	62,936	1937	83,342.41	1,324	23,472.00	.373	56,611.41	.899	3,259	.052				1	1	1	10
Jones	11,005	1949	24,319.00	2,210	6,212.00	.565	17,436.00	1,584	671	.061	D			3	2	1s.	20
Lenoir (M.H.)	55,976	1917	97,418.64	1,762	25,189.00	.455	68,976.64	1,248	3,253	.059	1		1	5	3	4	20
Madison	26,742	1915	37,531.00	1,403	10,333.00	.386	26,136.00	.977	1,065	.040	1			2	1	1	14.5
McDowell	17,217	1949	28,094.00	1,632	7,861.00	.457	19,409.00	1,127	824	.048	1			2	2	1	20
Martin (M.H.)	27,139	1917	61,934.05	2,282	14,864.00	.548	45,317.05	1,670	1,753	.064	1			2	1	1	20
Mecklenburg Ex.C.	70,547	1918	274,179.37	3,886	21,110.00	.929	249,261.37	3,523	3,808	.054		1		20s.	8	7d.	52d.
Mitchell-Yancey	27,914	1944/35	35,256.69	1,263	14,372.00	.515	19,519.69	.699	1,365	.049				2	1	1	12
Mitchell	13,906	1944	14,303.09	1,029	6,734.00	.484	6,881.09	.495	688	.050				2	1	1	
Yancey	18,008	1935	17,120.00	1,222	6,843.00	.489	9,600.00	.685	677	.048				2	1	1	10
Montgomery	18,408	1942	28,548.44	1,551	7,941.00	.432	19,681.44	1,069	826	.050	D			3	2	2	20
Moore	36,733	1928	53,534.00	1,457	13,197.00	.359	38,725.00	1,054	1,612	.044	1			2	2	2	20
Nash (M.H.)																	
Ex.R.M.	43,680	1915	67,569.52	\$ 1,547	18,587.00	\$ .426	\$ 46,740.52	\$ 1,070	\$ 2,242	\$ .051	1			5	2	2	20
New Hanover (M.H.)	71,742	1913	227,840.56	3,176	40,680.00	.567	182,976.56	2,551	4,184	.058	1	1	1	2	15	4s.	11b.t.
Northampton	26,811	1917	47,630.00	1,777	11,968.00	.447	34,086.00	1,271	1,576	.059	1			3	1	2	30
Onslow	82,706	1941	76,240.00	.922	18,318.00	.291	54,405.00	.658	3,517	.043	1			5	3	2	

County, City or District	1960 Population	Date Organized	Total Budget			Source of Funds and Amounts				Time Part		Full Time Personnel (Merit System)					Dent. And Wks.
			Amount	Per Cap.	State Inc. St. M. H.	Per Cap.	Local Appropriation	Per Cap.	Federal Inc. Fed. M. H. and Other	Per Cap.	H. D.	H. D.	Oth. Med. Dir.	P. H. N.	Sant. H.	Clerks And Others	
Orange-P-C-Lee-Caswell	142,622	1935-37-46	276,960.86	1.942	61,214.00*	.429	209,187.86	1.467	6,559	.046	1	1	1	20s.	5	8	52
Orange	42,970	1935	52,746.00	1.228	11,241.00	.262	40,000.00	.931	1,505	.035				11	3	4	
Person	26,394	1935	40,852.00	1.548	9,976.00	.378	29,500.00	1.118	1,376	.052				2	1	1	
Chatham	26,785	1937	34,449.00	1.286	10,064.00	.376	23,100.00	.863	1,265	.047				2	1	1	
Lee	26,561	1946	35,740.00	1.346	8,628.00	.433	24,600.00	.926	1,297	.049				2	1	1	
Caswell	19,912	1944	26,394.00	1.325	8,628.00	.433	16,650.00	.836	1,116	.056				2	1	1	
Pamlico	9,850	1949	18,237.00	1.851	6,120.00	.621	11,613.00	1.179	504	.051				2	1s.	7t.	10
Past-Perq-C-Chowan	52,135	1942-43-37	94,745.32	1.817	27,230.00	.522	61,933.32	1.245	2,582	.050	1			7	3	4	20
Pasquotank	25,630	1942	39,247.33	1.531	9,336.00	.364	28,731.23	1.121	1,190	.046				4			
Perquimans	9,178	1943	16,327.54	1.779	5,547.00	.604	10,288.54	1.121	492	.054				1			
Camden	5,598	1943	11,090.36	1.981	4,530.00	.809	6,275.36	1.121	285	.051				1			
Chowan	11,729	1937	19,957.31	1.702	6,194.00	.528	13,145.21	1.121	615	.053				1			
Pender	18,508	1941	30,120.00	1.627	9,015.00	.487	20,090.00	1.085	1,015	.055	1			2	1	1	10
Pitt (M.H.)	69,942	1917	166,916.00	2.386	34,326.25	.491	128,429.75	1.836	4,160	.059			4	10	3	5	20
Randolph	61,497	1927	78,004.88	1.268	16,647.00	.271	59,050.88	.960	2,307	.037				6	2	2	20
Richmond	39,202	1924	55,936.00	1.427	13,515.00	.345	40,545.00	1.034	1,876	.048				3	2	2	30
Robeson	89,102	1912	109,525.00	1.229	29,977.00	.386	74,194.00	.833	5,354	.060				7s.	4	4ed.	30
Rockingham	69,629	1940	93,454.37	1.342	20,308.00	.292	70,420.37	1.011	2,726	.039				7	3s.	3	30
Rowan (M.H.)	82,817	1918	160,892.13	2.015	33,913.00	.409	129,438.13	1.563	3,541	.043				4	3s.	3ed.	30
Rutherford-Polk	56,486	1924-33	70,158.80	1.242	21,106.00	.374	46,602.80	.825	2,450	.043				4	3	2	30
Rutherford	45,091	1924	48,094.00	1.066	13,936.00	.309	34,204.00	.714	1,954	.043				3	2	2	30
Polk	11,395	1938	14,749.00	1.294	5,852.00	.514	8,401.00	.737	496	.043				3	2	2	30
Sampson	48,013	1913	70,987.61	1.478	18,058.00	.376	50,226.61	1.046	2,703	.056				6	2	2	36
Scotland	25,183	1933	57,449.55	2.281	11,471.00	.430	46,502.55	1.767	1,476	.059				4	1	2	20
Stanly	40,873	1937	65,160.66	1.594	13,485.00	.355	50,065.66	1.225	1,610	.039				3	2	2	20
Stokes	22,314	1931	47,178.40	2.114	9,231.00	.416	36,984.40	1.657	913	.041				2	1	1	10
Surry	48,205	1919	85,953.51	1.783	15,303.00	.318	68,707.51	1.425	1,943	.040	1			5	1	4	20
Tennessee	16,372	1937	25,255.00	1.542	7,368.00	.450	17,259.00	1.054	628	.038				2	1	1	16
Tyrell-Washington	18,008	1937	40,714.85	2.261	12,062.00	.670	27,638.85	1.535	1,014	.056				2	1	2	16
Tyrell	4,520	1937	9,594.00	2.123	4,330.00	.958	5,000.00	1.106	264	.059				1		1	
Washington	13,488	1937	22,662.00	1.680	6,940.00	.515	14,972.00	1.110	750	.055				3	2	2	20
Union (M.H.)	44,670	1938	77,356.52	1.732	14,967.00	.335	60,096.52	1.346	2,993	.051				3	2	2	20
Vance	32,002	1920	44,613.44	1.394	11,553.00	.361	31,490.44	.984	1,570	.049				3	1	2	20

Wake (M.H.) .....	169,082	1918	321,205.00	1,900	61,906.00*	.366	252,374.00	1,493	6,925	.041	1	1	6	21dm.s.	7s.	10d.t.	52d.	
Warren .....	19,652	1945	31,233.12	1,589	9,144.00	.465	20,898.12	1,063	1,191	.061	1	1	2	1	1	10		
Wayne (M.H.) .....	82,059	1920	142,274.00	1,734	27,361.00*	.333	110,531.00	1,347	4,382	.054	1	1	10s.	4s.	8	0		
Wilkes .....	45,269	1920	37,232.97	.832	15,717.00	.347	19,350.97	.437	2,165	.048	1	1	3	1	1	20		
Wilson (M.H.) .....	57,716	1916	176,639.76	3,060	32,942.00	.571	140,089.76	2,437	3,608	.062	1	1	6	6	3s.	4	10	
Total Counties .....	4,322,444		8,677,342.43	2,007	1,732,961.46	.401	6,736,785.97	1,558	207,595	.048	15	49	8	77	514	239	299	1752
Charlotte (M.H.) .....	201,564	1918	965,026.00	4,737	76,613.00*	.380	880,308.00	4,367	8,105	.040	1	13	52dm.s.	27s.i.	40ed.b.	52d.		
Rocky Mount (M.H.) ..	32,147		100,075.00	3,113	11,240.00	.349	87,074.00	2,709	1,761	.055	D		5	3	5b.	20		
Total Cities .....	233,711		1,065,101.00	4,557	87,853.00	.376	967,382.00	4,139	9,866	.042	0	1	0	13	57	30	45	72
Combined Total .....	4,556,155		9,742,443.43	2,138	1,820,814.46	.399	7,704,167.97	1,691	217,461	.048	15	50	8	90	571	269	344	1824
Recaptured and unbudgeted funds .....			3,154.80		3,154.80													
Grand Total .....	4,556,155		\$9,745,598.23	\$ 2,139	\$1,823,969.26**	\$ .400	\$7,704,167.97***	\$1,691	\$217,461****	\$ .048	15	50	8	90	571	269	344	1824

\* Includes funds for Training Centers (10 Centers—One Lab. Total \$25,850)

\*\* State Mental Health Funds (\$333,409.26) included (See Departments—M.H.)

\*\*\* Local Appropriation includes balance (brought forward) of \$608,332.06 from fiscal year 1961-62

\*\*\*\* Federal Mental Health Funds (\$817,461.00) included (see Departments—M.H.)

Regular Federal funds Allocated to Health Departments (\$200,000)

The Local breakdown of individual counties in Districts does not include any special funds, extra funds or balances.

D. — Service District—with Health Director  
 dn — Public Health Nursing Director  
 ds — Director of Sanitation Activities  
 s — Public Health Nursing Supervisor & San. Supr.  
 v — Veterinarian  
 i — Public Health Investigator

b — Bacteriologist  
 d — Dentist  
 ed — Health Educator  
 n — Nutritionist  
 t — Technician  
 a.a. — Admn. Assistant

M. H. — Mental Health Personnel  
 ex — Exclusive of  
 C — Charlotte  
 R. M. — Rocky Mount

vds. t.n.d.

Departments	Under Local Gov. Retirement	Contract Travel Plan	Per Capita Buying Income	Per Capita Local Approp.	Special Project Funds in Dept. Budget	Dental Deduction	Type of Audit	Days Work Week	On Minimum of Stand. M.S. Pay Plan
Alamance		\$	\$ 1,811	\$ 1,612	\$	\$	Monthly Audit	5½	Yes 1 Co.
Alleg-Ashe-Watauga	Yes 3 Cos.	10¢	7¢	.911		72	Annual Audit	5 Each	Yes 3 Cos.
Alleghany		7¢	1,218	.820			Annual Audit	5	
Ashe		7¢	1,010	.668			Annual Audit	5	
Watauga		7¢	1,161	.818			Annual Audit	5	
Anson	Yes 1 Co.	40 + 4¢	1,000	2,210			Annual Audit	5½	
Avery	Yes 1 Co.	7¢	1,042	.667		53	Monthly Audit	5	
Beaufort	Yes 1 Co.	Co. furnish cars	1,039	1,322		377	Monthly Audit	5	Yes 1 Co.
Bertie		30 + 4¢	854	1,001			Monthly Audit	5½	
Bladen	Yes 1 Co.	7¢	900	1,248			Monthly Audit	5	
Brunswick	Yes 1 Co.	7¢	995	1,418			Monthly Audit	5½	Yes 1 Co.
Buncombe	Yes 1 Co.	flat	1,794	3,294			Monthly Audit	5	Yes 1 Co.
Burke	Yes 1 Co.	30 + 4¢	1,509	1,190			Monthly Audit	5½	Yes 1 Co.
Cabarrus	Yes 1 Co.	40 + 5¢	1,631	1,929	Home Nursing. Prog. 11,000		Monthly Audit	5	Yes 1 Co.
Caldwell	Yes 1 Co.	30 + 4¢	1,317	.736			Monthly Audit	5½	
Carteret	Yes 1 Co.	30 + 4¢	1,488	1,188			Monthly Audit	5 +	Yes 1 Co.
Catawba-Lin-Alex.	Yes 3 Cos.	35 + 4¢		1,374		1,134	Annual Audit	5 Each	
Catawba		35 + 4¢	1,645	1,255			Annual Audit	5	
Lincoln		35 + 4¢	1,304	1,231			Annual Audit	5	
Alexander		35 + 4¢	1,223	1,255			Annual Audit	5	
Cherokee-Clay		30 + 4¢		1,237		37	Monthly Audit	5 Each	Yes 2 Cos.
Cherokee		30 + 4¢	1,013	.846			Monthly Audit	5	
Clay		30 + 4¢	863	.815			Monthly Audit	5	
Cleveland		7¢	1,209	1,561			Monthly Audit	5½	Yes 1 Co.
Columbus		15 + 7¢	1,048	1,034			Monthly Audit	5	Yes 1 Co.
Craven	Yes 1 Co.	30 + 4¢	1,324	1,346			Monthly Audit	5½	Yes 1 Co.
Cumberland	Yes 1 Co.	30 + 5¢	1,380	1,161			Monthly Audit	5½	Yes 1 Co.
Currituck		30 + 4¢	1,281	1,697			Monthly Audit	5	
Dare	Yes 1 Co.	30 + 4¢	1,312	2,439			Monthly Audit	5	Yes 1 Co.



Davidson	Yes	2 Cos.	7¢	1,622	1,005	Monthly Audit	5½	Yes	1 Co.
Davie-Yadkin	Yes		7¢		1,025	Monthly Audit	5 Each	Yes	2 Cos.
Davie			7¢	1,407	.990	Monthly Audit	5		
Yadkin			7¢	1,044	.726	Monthly Audit	5		
Duplin	Yes	1 Co.	7¢	928	1,130	Monthly Audit	5½	Yes	1 Co.
Durham	Yes	1 Co.	30 + 6¢	1,915	2,912	Monthly Audit	5	Yes	1 Co.
Edgecombe	Yes	1 Co.	8¢	1,029	1,354	Annual Audit	5		
Forsyth			graduated	2,041	1,854	Monthly Audit	5		
Franklin	Yes	1 Co.	flat	983	1,088	Monthly Audit	5	Yes	1 Co.
Gaston	Yes	1 Co.	8¢	1,537	1,952	Monthly Audit	5		
Graham	Yes	1 Co.	30 + 4¢	887	1,542	Monthly Audit	5	Yes	1 Co.
Granville	Yes	1 Co.	30 + 4¢	1,238	1,172	Monthly Audit	5	Yes	1 Co.
Greene	Yes	1 Co.	flat	796	1,661	Annual Audit	5		
Guilford	Yes	1 Co.	graduated	2,046	2,722	Monthly Audit	5	Yes	1 Co.
Halifax	Yes	1 Co.	30 + 4¢	1,040	1,893	Monthly Audit	5		
Harnett	Yes	1 Co.	35 + 7¢	1,086	1,018	Monthly Audit	5	Yes	1 Co.
Haywood			7¢	1,603	1,515	Monthly Audit	5		
I Henderson	Yes	1 Co.	flat	1,541	1,348	Monthly Audit	5	Yes	1 Co.
I Herford-Gates			30 + 4¢		1,296	Monthly Audit	5 Each	Yes	2 Cos.
I Herford			30 + 4¢	1,080	1,068	Monthly Audit	5	Yes	
Gates			30 + 4¢	911	1,311	Monthly Audit	5		
Hoke	Yes	1 Co.	8¢	965	1,611	Monthly Audit	5		
Hyde	Yes	1 Co.	30 + 4¢	938	1,587	Monthly Audit	5	Yes	1 Co.
Iredell	Yes	1 Co.	7¢	1,467	1,061	Monthly Audit	5½	Yes	1 Co.
Jackson-Macon-Swain	Yes	3 Cos.	30 + 4¢		1,093	Monthly Audit	5 Each		
Jackson				1,176	.723	Monthly Audit	5		
Macon				1,059	.801	Monthly Audit	5		
Swain				960	1,179	Monthly Audit	5		
Johnston			7¢	996	.899	Monthly Audit	5½		
Jones			30 + 4¢	813	1,584	Monthly Audit	5		
Lenoir			20 + 7¢	1,290	1,248	Monthly Audit	5	Yes	1 Co.
McDowell	Yes	1 Co.	30 + 4¢	1,272	.977	Monthly Audit	5		
Madison	Yes	1 Co.	7¢	1,046	1,127	Monthly Audit	5		
Marlin	Yes	1 Co.	10 + 7¢	909	1,670	Monthly Audit	5½	Yes	1 Co.
Mecklenburg	Yes	1 Co.	flat	2,158	3,533	Monthly Audit	5	Yes	1 Co.

Departments	Under Local Gov. Retirement	Contract Travel Plan	Per Capita Buying Income	Per Capita Local Appropri.	Special Project Funds in Dept. Budget	Dental Deduction	Type of Audit	Days Work Week	On Minimum of Stand. M.S. Pay Plan	
									Yes	2 Cos.
Mitchell-Yancey	Yes	2 Cos.		\$						
Mitchell		7¢	1,103	\$ .699		\$112	Monthly Audit	5 Each	Yes	2 Cos.
Yancey		7¢	1,044	.495			Monthly Audit	5		
Montgomery		7¢	1,044	.685			Monthly Audit	5		
Moore	Yes	30 + 4¢	1,166	1,069			Monthly Audit	5		
Nash	Yes	7¢	1,440	1,054			Monthly Audit	5½	Yes	1 Co.
New Hanover	Yes	30 + 4¢	1,220	1,070			Monthly Audit	5	Yes	1 Co.
Northampton	Yes	30 + 4¢	1,602	2,551			Annual Audit	5		
Onslow	Yes	7¢	851	1,271			Monthly Audit	5		
Orange	Yes	7¢	1,404	.658			Monthly Audit	5½		
Orange-Person-C.-L.-Cas.	Yes	5 Cos.	1,815	1,467	12,228 Heart 10,000 C. D. 30,000 Cancer		Monthly Audit	5 Each		
Person			1,110	1,118			Monthly Audit	5		
Chatham			1,149	.863			Monthly Audit	5		
Lee			1,414	.926			Monthly Audit	5		
Caswell			968	.836			Monthly Audit	5		
Pamlico	Yes	1 Co.	978	1,179	5,000 C. D.		Annual Audit	5		
Pasq.-Perq.-Camden-Chowan	Yes	4 Cos.		1,245		274	Annual Audit	5 Each		
Pasquotank		7¢	1,345	1,121			Annual Audit	5		
Perquimans		7¢	1,016	1,121			Annual Audit	5		
Camden		7¢	988	1,121			Annual Audit	5		
Chowan		7¢	1,005	1,121			Annual Audit	5		
Pender	Yes	1 Co.	864	1,085			Monthly Audit	5		
Pitt	Yes	1 Co.	1,132	1,836		245	Monthly Audit	5		
Randolph		15 + 7¢	1,570	.960		378	Annual Audit	5½		
Richmond		30 + 4¢	1,310	1,034			Monthly Audit	5½	Yes	- Co.
Robeson	Yes	7¢	886	.833			Monthly Audit	5		
Rockingham	Yes	35 + 4¢	1,472	1,011			Monthly Audit	5		
Rowan	Yes	7¢	1,630	1,563			Monthly Audit	5½	Yes	1 Co.
Rutherford-Polk	Yes	40 + 4¢		.825			Annual Audit	5 Each		
Rutherford		40 + 4¢	1,335	.714			Annual Audit	5		



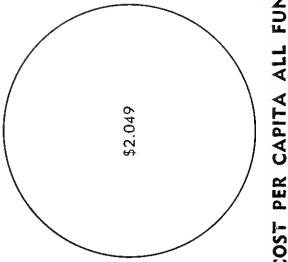
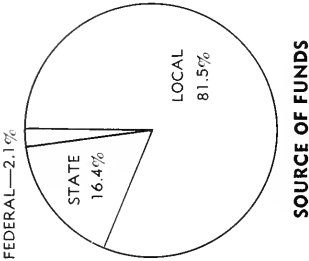
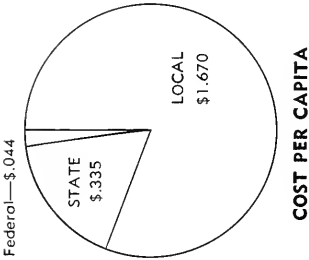
Departments	M C H	Cancer	Crippled Children	Total
Alamance	\$ 7,030.13	\$ 4,472.58	\$ 18,059.62	\$ 29,562.33
Alleg-Ashe-Watauga	3,360.43	1,681.60	11,092.36	16,134.39
Alleghany	1,376.58	589.56	3,305.82	5,271.96
Ashe	1,558.50	1,032.04	4,469.70	7,060.24
Watauga	425.35	60.00	3,316.84	3,802.19
Anson	1,978.06	1,906.57	8,110.30	11,994.93
Avery	47.50	0	3,980.47	4,027.97
Beaufort	4,858.80	3,668.63	7,647.98	16,175.41
Bertie	1,766.31	943.13	6,182.67	8,892.11
Bladen	3,371.06	3,138.26	12,468.23	18,977.55
Brunswick	4,378.33	892.52	2,090.82	7,361.67
Buncombe	23,158.33	2,797.59	24,039.29	49,995.21
Burke	1,022.36	589.62	5,350.74	6,962.72
Cabarrus	1,547.30	1,783.87	10,682.39	14,013.56
Caldwell	2,815.06	1,285.62	11,223.32	15,324.00
Carteret	715.94	584.03	7,734.60	9,034.57
Catawba-Lin-Alex	7,961.89	982.35	19,525.41	28,469.65
Catawba	6,267.59	424.32	12,519.25	19,211.16
Lincoln	705.79	558.03	1,990.00	3,253.82
Alexander	988.51	0	5,016.16	6,004.67
Cherokee-Clay	474.75	867.04	4,086.81	5,428.60
Cherokee	72.50	728.44	1,435.81	2,236.75
Clay	402.25	138.60	2,651.00	3,191.85
Cleveland	1,067.32	414.16	8,414.19	9,895.67
Columbus	7,609.88	3,248.65	14,497.34	25,355.87
Craven	4,278.02	2,179.37	8,626.18	15,083.57
Cumberland	2,362.36	4,534.24	21,005.10	27,901.70
Currituck	15.64	0	462.19	477.83
Dare	12.00	385.21	1,049.71	1,446.92
Davidson	1,721.17	2,270.82	13,160.68	17,152.67
Davie-Yadkin	340.18	1,506.07	4,630.55	6,476.80
Davie	25.28	524.15	1,626.74	2,176.17
Yadkin	314.90	981.92	3,003.81	4,300.63
Duplin	6,482.49	1,669.16	6,526.62	14,678.27
Durham	30,027.02	12,070.43	21,590.69	63,688.14
Edgecombe	4,828.01	4,953.06	10,674.65	20,455.72
Forsyth	22,373.49	3,040.05	24,428.01	49,841.55
Franklin	1,919.51	4,091.90	8,737.20	14,748.61
Gaston	4,615.68	3,616.83	20,866.55	29,099.06
Graham	265.58	0	2,027.39	2,292.97
Granville	7,412.37	2,857.62	7,466.75	17,736.74
Greene	1,509.10	805.62	5,108.63	7,423.35
Guilford	15,977.24	10,919.21	34,537.30	61,433.75
Halifax	3,664.29	6,999.83	14,102.81	24,766.93
Harnett	10,170.93	5,380.06	12,874.85	28,425.84
Haywood	1,258.45	176.26	6,831.88	8,266.59
Henderson	111.16	1,921.04	4,384.98	6,417.18
Hertford-Gates	1,620.91	2,246.04	7,531.66	11,398.61
Hertford	1,574.23	1,284.43	5,720.79	8,579.45
Gates	46.68	961.61	1,810.87	2,819.16
Hoke	947.85	931.74	9,609.18	11,488.77
Hyde	40.74	649.95	45.32	736.01
Iredell	1,159.28	1,196.50	15,131.32	17,487.10
Jackson-Macon-Swain	2,190.84	1,314.60	7,075.64	10,581.08
Jackson	1,376.52	440.17	2,999.69	4,816.38
Macon	438.50	770.91	2,878.39	4,087.80
Swain	375.82	103.52	1,197.56	1,676.90

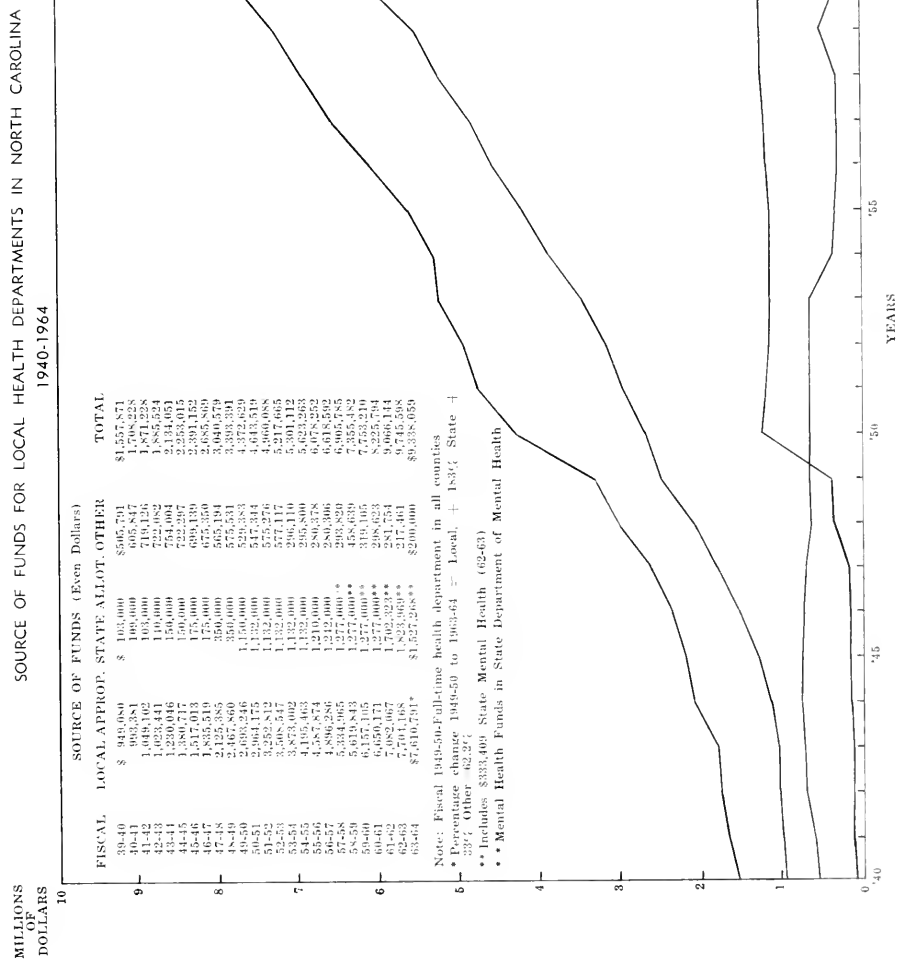
Departments	M C H	Cancer	Crippled Children	Total
Johnston	4,941.95	3,357.26	17,747.21	26,046.42
Jones	1,691.32	838.30	1,458.43	3,988.05
Lenoir	9,152.44	4,168.25	13,371.67	26,692.36
McDowell	2,714.50	57.62	3,273.91	6,046.03
Madison	2,921.79	938.63	5,518.01	9,378.43
Martin	1,686.38	2,621.38	5,153.75	9,461.51
Mecklenburg	1,956.13	9,585.29	49,619.29	61,160.71
Mitchell-Yancey	1,644.34	0	4,972.56	6,616.90
Mitchell	792.92	0	2,032.12	2,825.04
Yancey	851.42	0	2,940.44	3,791.86
Montgomery	1,272.28	1,146.36	5,941.88	8,360.52
Moore	5,065.23	1,304.91	7,916.06	14,286.20
Nash	3,961.18	7,532.69	12,295.86	23,789.73
New Hanover	8,714.74	3,398.14	12,974.61	25,087.49
Northampton	1,440.88	3,218.49	8,947.62	13,606.99
Onslow	1,666.83	881.62	4,546.02	7,094.47
Orange-P-C-L-Caswell	27,983.60	9,900.77	33,335.39	71,219.76
Orange	13,952.14	1,884.49	6,917.07	22,753.70
Person	5,560.50	2,345.55	8,007.57	15,913.62
Chatham	2,842.63	950.67	7,190.92	10,984.22
Lee	2,922.59	2,884.76	7,779.49	13,586.84
Caswell	2,705.74	1,835.30	3,440.34	7,981.38
Pamlico	679.71	755.60	1,593.20	3,028.51
Pasq-Perq-Camden-Chowan	2,946.95	269.59	5,640.28	8,856.82
Pasquotank	1,582.92	0	2,541.08	4,124.00
Perquimans	778.25	0	1,461.20	2,239.45
Camden	—	124.33	735.48	859.81
Chowan	585.78	145.26	902.52	1,633.56
Pender	4,667.56	916.91	6,647.28	12,231.75
Pitt	3,522.64	3,126.93	19,514.99	26,164.56
Randolph	958.00	1,417.69	5,560.13	7,935.82
Richmond	5,905.63	2,070.95	12,972.06	20,948.64
Robeson	4,354.88	7,948.85	47,975.93	60,279.66
Rockingham	1,955.66	1,240.55	12,584.67	15,780.88
Rowan	1,996.97	3,075.06	16,282.11	21,354.14
Rutherford-Polk	3,073.08	3,666.34	7,321.04	14,060.46
Rutherford	1,515.43	649.70	5,290.16	7,455.29
Polk	1,557.65	3,016.64	2,030.88	6,605.17
Sampson	8,134.77	3,390.17	9,006.21	20,531.15
Scotland	1,162.08	2,834.99	14,184.73	18,181.80
Stanly	9.72	836.74	8,916.41	9,762.87
Stokes	2,248.14	208.98	1,926.41	4,383.53
Surry	8,724.49	873.65	8,785.72	18,383.86
Transylvania	1,857.09	0	2,157.05	4,014.14
Tyrrell-Washington	2,233.26	132.33	2,272.04	4,637.63
Tyrrell	107.62	0	369.14	476.76
Washington	2,125.64	132.33	1,902.90	4,160.87
Union	727.00	337.78	8,031.55	9,096.33
Vance	2,377.36	2,243.00	4,227.62	8,847.98
Wake	24,133.31	6,367.86	30,167.92	60,669.09
Warren	491.06	1,698.87	6,123.27	8,313.20
Wayne	3,904.31	379.66	10,618.51	14,902.48
Wilkes	2,509.14	1,185.16	12,701.24	16,395.54
Wilson	17,718.16	1,994.54	11,249.82	30,962.52
Charlotte	2,187.50	0		2,187.50
Rocky Mount	1,808.50	0		1,808.50
<b>TOTAL</b>	<b>\$385,568.32</b>	<b>\$200,893.74</b>	<b>\$897,204.84</b>	<b>\$1,483,666.90</b>

NORTH CAROLINA LOCAL HEALTH SERVICE BUDGET  
FISCAL YEAR 1963-1964

TOTAL STATE FUNDS .....	\$ 1,527,268.00
TOTAL FEDERAL FUNDS .....	\$ 200,000.00
TOTAL LOCAL FUNDS .....	\$ 7,610,791.69
TOTAL BUDGET LOCAL HEALTH .....	\$ 9,338,059.69

POPULATION SERVED **4,556,155**  
(1960 Census)  
100% COVERAGE





County, City or District	1960 Population	Date Organized	Total Budget		Source of Funds and Amounts						Part Time Personnel (Alert System)					Clerks And Others	Dent. And Wks.
			Amount	Per Cap.	State Allotment	Per Cap.	Local Appropriation	Per Cap.	Federal Allotment	Per Cap.	H. D.	H. D.	Oth. Med. Dir.	P. N.	Sant.		
Alamance	85,074	1938	\$178,311.00	\$ 2.081	\$ 23,184.00	\$ .271	\$ 152,185.00	\$ 1.776	\$ 2,942	\$ .034				12s.	5s.	6ed.	30
Allegh-Ashe-Watauga	45,031	1938-35	66,308.98	1.472	21,831.00	.485	42,428.98	.942	2,019	.045				3	3s.	3	26
Alleghany	7,734	1938	11,566.17	1.496	4,894.00	.633	6,339.17	.820	353	.043				1	1	1	
Ashe	19,768	1938	22,481.17	1.377	8,322.00	.421	13,207.17	.668	952	.043				1	1	1	
Watauga	17,529	1935	22,278.17	1.271	7,175.00	.409	14,339.17	.818	764	.044				1	1	1	
Ashe	24,962	1937	65,584.52	2.627	11,592.00	.464	52,574.52	2.106	1,418	.057	1			3	1	2	20
Ashe	12,009	1935	15,268.54	1.271	6,535.00	.544	8,192.54	.682	541	.045				1	1	1	6
Avery	36,014	1923	69,082.35	1.918	14,449.00	.401	52,645.35	1.462	1,988	.055				5	3	2	0
Baile	37,647.68	1946	9,580.59	1.546	9,580.59	.393	26,556.09	1.091	1,511	.062	1			2	1	2	20
Bertie	24,350	1934	27,617.35	1.157	12,905.00	.447	36,139.12	1.251	1,705	.059				4	2	2	10
Bladen	28,881	1921	50,749.12	1.757	9,596.00	.473	31,359.00	1.546	1,166	.058				2	1	2	20
Brunswick	20,278	1949	42,121.00	2.077	9,596.00	.473	31,359.00	1.546	1,166	.058				2	1	2	10
Buncombe	130,074	1913	450,872.00	3.466	36,663.00*	.282	409,648.00	3.149	4,561	.035			1	18s.	12s.i.	12t.ed.	53d.
Burke	52,701	1937	86,788.42	1.647	15,698.00	.298	69,217.42	1.313	1,873	.036				4	3	2	20
Cabarrus	68,137	1919	150,854.66	2.214	21,234.00*	.312	127,115.66	1.865	2,505	.037				10s.	5	5	40
Caldwell	49,552	1937	60,870.00	1.228	16,353.00	.330	42,412.00	.856	2,105	.042				4	2	2	20
Carteret	30,940	1941	49,048.28	1.585	10,810.00	.349	37,049.28	1.189	1,189	.038				3	1	2	10
Catawba-Lin-Alex.	117,630	1938-40-47	208,252.12	1.771	38,788.00	.330	164,992.12	1.403	4,472	.038				14s.	8s.	8ed.t.	0
Catawba	73,191	1938	116,430.00	1.591	19,915.00	.272	93,904.00	1.283	2,611	.036				8	3	6	0
Catawba	28,814	1940	48,286.00	1.676	10,135.00	.352	36,968.00	1.283	1,183	.041				3	3	1	1
Lincoln	15,625	1947	27,618.00	1.767	6,893.00	.441	20,047.00	1.283	1,678	.043				2	1	3	22
Alexander	28,293	1937	58,388.87	2.064	18,604.00	.658	38,427.87	1.358	1,357	.048				2	1	3	
Cherokee-Clay-Graham	16,335	1937	26,431.00	1.617	7,374.00	.451	18,300.00	1.120	757	.046				2	1	1	
Cherokee	5,526	1937	10,935.00	1.979	4,555.00	.824	6,100.00	1.104	280	.051				1	1	1	
Clay	6,432	1937	13,228.00	2.056	4,775.00	.742	8,133.00	1.264	320	.050				5	3	4b.	30
Graham	66,048	1938	98,774.50	1.495	20,217.00	.306	75,525.50	1.143	3,032	.046				5	2	3	20
Cleveland	48,973	1921	73,368.00	1.498	17,776.00	.363	52,835.00	1.079	2,757	.056				3	3	5t.	20
Columbus	58,773	1921	89,989.97	1.531	18,678.00	.318	68,430.97	1.104	2,881	.049				4s.	3	5t.	20
Craven	148,418	1919	210,441.26	1.418	38,282.00*	.258	165,718.26	1.117	6,441	.043				13s.	11s.i.	7b.	30
Cumberland	6,601	1938	15,485.53	2.346	4,818.00	.729	10,342.53	1.567	330	.050				1	1	1	6
Currituck	5,935	1937	22,847.15	3.849	4,958.00	.835	17,617.15	2.968	2,972	.046				1	2	1	30
Dare	79,493	1917	102,766.00	1.292	21,394.00	.269	78,334.00	.855	2,978	.038				7	3	4b.	30
Davidson	39,532	1938-31	59,605.18	1.505	16,919.00	.427	41,115.18	1.038	1,571	.040				4	2	2	20
Davidson	16,728	1931	24,533.90	1.467	6,936.00	.415	16,952.90	1.013	926	.049				2	1	1	
Davidson	22,804	1931	26,046.00	1.142	8,405.00	.369	16,715.00	1.013	926	.040				2	1	1	
Yadkin	40,270	1934	67,076.01	1.666	16,195.00	.402	48,556.01	1.206	2,235	.058				5	2	2	20
Durham	111,995	1913	311,641.00	2.783	31,766.00*	.284	275,827.00	2.463	4,048	.036			1	1	21dn.	11s.i.	12b.d.



Edgecombe (Ex. R.M.) ..	39,401	1919	\$ 68,805.00	\$1,746	\$15,677.00	\$3,398	\$ 50,761.00	\$1,288	\$2,367	\$.060	D	5	2	3	20
Forsyth .....	189,428	1913	364,182.00	1,922	45,541.00	.240	311,668.00	1,645	6,973	.037	1	23s.	14s.i.	14b.t.	30d.
Franklin .....	28,755	1930	45,223.00	1,573	11,505.00	.402	31,990.00	1,113	1,673	.058	1	3	1	2	20
Gaston .....	127,074	1928	280,791.00	2,209	34,480.00	.271	241,428.00	1,900	4,883	.038	1	18s.	13s.	12ed.	30
Granville .....	33,110	1919	55,318.10	1,670	12,754.00	.385	41,027.10	1,239	1,537	.046	D	4	1	1	30
Greene .....	16,741	1937	39,709.40	2,372	9,272.00	.554	29,300.40	1,750	1,137	.068	D	3	1	2	10
Guilford .....	246,520	1911	659,890.52	2,677	60,076.00 *	.244	591,354.52	2,399	8,460	.034	1	1	17s.v.	27ed.t.	52d.
Halifax .....	58,956	1919	134,255.68	2,977	22,517.00*	.382	108,282.68	1,837	3,456	.058	1	10p.t.	3	5b.	20
Hamett .....	48,236	1938	70,708.00	1,468	17,503.00	.363	50,761.00	1,052	2,534	.053	1	5s.	1	2	20
Haywood .....	30,711	1934	67,705.06	1,705	12,769.00*	.322	55,003.95	1,348	1,411	.035	1	4	2	3t.	20
Heardson .....	36,163	1947	68,534.95	1,895	12,187.00	.337	55,003.95	1,521	1,344	.035	1	3	2	2	20
Hertford-Gates .....	31,972	1936-40	56,692.62	1,773	15,340.00	.480	39,613.62	1,239	1,739	.054	1	4	1	2	20
Hertford .....	22,718	1936	35,329.90	1,555	9,545.00	.420	24,572.90	1,082	1,212	.053	1	2	2	1	20
Gates .....	9,254	1940	18,608.46	2,011	5,795.00	.626	12,286.46	1,328	527	.057	1	2	1	1	10
Hoke .....	16,356	1943	36,540.84	2,234	8,604.00	.526	26,969.84	1,649	967	.059	1	2	1	1	10
Hyde .....	5,765	1937	14,053.64	2,438	4,941.00	.857	8,782.64	1,524	330	.057	1	1	1	1	10
Fredell .....	62,526	1942	93,142.00	1,490	19,330.00	.309	71,247.00	1,139	2,565	.042	1	5	3	3t.	20
Jackson-Macon-Swain ....	17,780	1934-36-34	63,558.91	1,546	20,514.00	.409	41,257.91	1,004	1,787	.043	1	3	3s.	3	26
Jackson .....	14,935	1936	21,062.09	1,845	7,110.00	.400	13,231.09	744	721	.041	1	1	1	1	10
Macon .....	8,387	1934	19,762.83	1,323	6,890.00	.457	12,311.83	824	631	.043	1	1	1	1	10
Swain .....	62,936	1937	15,952.94	1,902	5,346.00	.637	10,171.94	1,213	435	.052	1	1	1	1	10
Johnston .....	11,005	1949	76,621.59	1,217	21,597.00	.343	51,739.59	1,892	3,285	.052	1	6s.	2	2	30
Jones .....	55,276	1917	23,036.00	2,093	6,504.00	.591	15,784.00	1,434	748	.068	D	2	1	1	10
Lenoir .....	26,742	1917	87,756.00	1,588	19,227.00	.348	65,715.00	1,189	2,816	.051	1	6	3s.	4	20
McDowell .....	27,217	1945	37,934.00	1,819	10,770.00	.403	26,074.00	1,975	1,090	.041	1	2	1	1	20
Madison .....	27,139	1949	31,687.00	1,841	7,880.00	.458	23,023.00	1,337	784	.046	1	3	1	1	14.5
Martin .....	70,547	1918	35,531.08	2,194	12,345.00	.435	45,555.08	1,679	1,631	.060	1	3	1	1	20
McKenburg (Ex. C.) ..	27,914	1937	467,039.20	6,621	21,799.00	.309	441,484.20	6,258	3,776	.054	1	21s.	9s.	6ed.	12
Mitchell-Yancy .....	13,906	1944-35	3,665.81	1,025	14,021.00	.502	23,388.81	.838	1,256	.234	1	2	1	2	12
Mitchell .....	13,906	1944	14,188.09	1,380	6,661.00	.479	6,881.09	.495	646	.046	1	1	1	1	10
Yancy .....	14,008	1935	17,340.00	1,238	6,730.00	.480	10,000.00	.714	610	.044	1	1	1	1	10
Montgomery .....	18,403	1942	29,552.85	1,606	8,150.00	.443	20,464.85	1,112	938	.051	1	2	1	1	20
Moore .....	36,733	1928	59,934.00	1,632	12,962.00	.353	45,414.00	1,236	1,558	.043	1	3	2	2	20
Nash (Ex. R.M.) .....	43,680	1915	65,414.52	1,497	16,350.00	.374	46,917.52	1,074	2,147	.049	1	5	2	2	20
New Hanover .....	71,472	1913	190,999.00	2,662	21,164.00	.295	166,818.00	2,325	3,017	.042	1	13s.	4ds.	11b.t.	30
Northampton .....	26,811	1917	48,851.00	1,822	12,518.00	.467	31,658.00	1,293	1,675	.062	1	3	1	1	30
Onslow .....	82,706	1941	90,303.75	1,092	19,318.00	.234	67,320.75	.814	3,665	.044	1	6	4	2	30
Orange-P-C-Lee-Caswell ..	142,622	1935-37-44	303,164.62	2,126	62,672.00*	.440	234,044.62	1,641	6,448	.045	1	1	5	10	52

County, City or District	1960 Population	Date Organized	Total Budget		Source of Funds and Amounts					Part Time	Full Time Personnel (Merit System)						
			Amount	Per Cap.	State Allotment	Per Cap.	Local Appropriation	Per Cap.	Federal Allotment		Per Cap.	II, D.	II, D.	Oth. Med. Dir.	P. H. N.	Sant, N.	Clerks And Others
Orange .....	42,970	1935	59,430.00	1.383	11,455.00	.267	46,500.00	1.082	1,475	.034				7	3	5	
Person .....	26,394	1935	42,458.00	1.609	10,110.00	.383	31,000.00	1.175	1,348	.051				2	1	1	
Chatham .....	26,785	1937	37,526.00	1.401	10,290.00	.384	26,000.00	.971	1,236	.046				2	1	2	
Lee .....	26,561	1946	37,438.00	1.410	10,119.99	.381	26,000.00	.979	1,319	.050				2		1	
Cassell .....	19,912	1944	27,268.00	1.370	8,698.00	.437	17,500.00	.879	1,070	.054				2		1	
Pamlico .....	9,850	1919	22,333.00	2.288	6,329.00	.653	15,580.00	1.582	1,524	.053				2		1	
Paso-Perq-C-Chowan .....	52,135	1912-43-37	93,483.71	1.793	28,321.00	.543	62,480.71	1.199	2,682	.051		D		7	1s.	71.	10
Pasquotank .....	25,630	1942	42,025.60	1.640	9,557.00	.373	31,268.60	1.220	1,200	.047		1		7	3s.		20
Perquimans .....	9,178	1943	16,485.54	1.796	5,699.00	.621	10,288.54	1.121	498	.054				1		1	
Camden .....	5,598	1943	11,223.36	2.005	4,642.00	.829	6,275.36	1.121	306	.055				1		1	
Chowan .....	11,729	1937	20,242.21	1.726	6,416.00	.547	13,148.21	1.121	678	.058				1		1	
Pender .....	18,508	1941	33,304.00	1.799	9,411.00	.508	22,819.00	1.233	1,074	.058		1		2	1		10
Pitt .....	69,942	1917	124,583.00	1.781	23,421.00	.335	97,608.00	1.395	3,554	.051				10s.	3	5	20
Randolph .....	61,497	1927	80,778.32	1.314	16,787.00	.273	61,794.32	1.005	2,197	.036				6	2	3	10
Richmond .....	39,202	1924	56,914.00	1.452	14,127.00	.360	40,840.00	1.042	1,947	.050				3	2	2	20
Robeson .....	89,102	1912	112,453.00	1.262	32,350.00	.363	74,362.00	.835	5,741	.064				7s.	4	4ed.	30
Rockingham .....	69,629	1940	101,950.72	1.464	20,904.00	.300	78,324.72	1.125	2,722	.039		D		3s.	7	3	30
Rowan .....	82,817	1918	131,827.00	1.592	22,231.00	.268	106,736.00	1.289	2,860	.035		1		9s.	4	3ed.	30
Rutherford-Polk .....	46,456	1924-38	74,565.37	1.320	21,257.00	.376	51,001.37	.903	2,307	.041				2	3	2	30
Rutherford .....	45,091	1924	50,532.00	1.121	14,013.00	.311	34,645.00	.768	1,874	.042				3	2	2	
Polk .....	11,395	1938	15,218.00	1.336	5,841.00	.513	8,944.00	.785	433	.038				1	1	1	
Sampson .....	48,013	1913	67,333.08	1.402	18,648.00	.388	45,917.08	.956	2,768	.058				5	2	2	20
Scotland .....	25,183	1943	58,642.00	2.329	11,781.00	.468	45,387.00	1.802	1,474	.039		1		4	1	2	20
Stanly .....	40,873	1937	65,787.53	1.610	12,793.00	.313	51,414.53	1.258	1,580	.039				2	2	2	20
Stokes .....	22,314	1931	49,824.05	2.233	9,401.00	.421	39,488.05	1.770	935	.042		1		2	1	1	10
Surry .....	48,205	1919	91,093.85	1.902	15,730.00	.326	74,070.85	1.537	1,893	.039				5	2	4	20
Transylvania .....	16,372	1937	27,239.00	1.664	7,287.00	.445	19,381.00	1.184	571	.035		1		2	1	1	10
Tyrell-Washington .....	18,008	1937	42,291.18	2.318	12,338.00	.685	28,900.18	1.605	1,053	.063		1		2	1	2	16
Tyrell .....	4,520	1937	9,701.00	2.146	4,416.00	.977	5,000.00	1.106	285	.058				1		1	
Washington .....	13,488	1937	22,814.00	1.691	7,074.00	.524	14,772.00	1.110	768	.057				3	2	1	
Union .....	44,670	1938	79,460.31	1.779	14,516.00	.325	62,777.31	1.405	2,167	.049		1		3	2	2	52
Vance .....	32,002	1920	50,290.05	1.572	13,023.00	.407	35,641.05	1.114	1,626	.051		1		3	1	2	20
Wake .....	169,082	1918	283,080.68	1.674	43,962.00*	.260	232,943.68	1.378	6,175	.036				4th.		9th.	52d.
Warren .....	19,652	1945	32,319.92	1.645	9,431.00	.480	21,617.92	1.102	1,241	.063		D		3	7s.	2	10
Wayne (R) .....	82,059	1920	153,797.00	1.874	26,277.00*	.320	123,333.00	1.503	4,187	.051		1		9s.	4s.	8t.	0

Wilkes .....	45,269	1920	856	15,726.00	.347	21,028.17	.465	2,012	.044	1	1	3	1	1	20
Wilson .....	57,716	1916	1,886	20,142.00	.349	85,842.00	1,487	2,914	.050	1	1	6	38.	3	20
Total Counties .....	4,322,444		8,353,613.22	1,933	1,475,460.59	.341	6,085,434.63	1,547	192,218	.045	15	49	5	506	1698
Charlotte .....	201,564	1918	4,515	44,291.00*	.220	859,577.00	4,265	6,075	.030	1	1	1	508.	251.v.	52
Rocky Mount .....	32,147		75,352.06	2,303	8,965.00	.279	65,280.06	2,034	1,707	.053	10	10	53.	2	4b.
Total Cities .....	233,711		985,895.06	4,218	53,256.00	.228	924,857.06	3,957	7,782	.033	0	1	1	55	27
Combined Total .....	4,556,155		9,339,508.28	2,050	1,528,716.59	.336	7,610,791.69	1,670	200,000	.044	15	50	6	561	272
Overbudgeted Funds .....			1,448.59		1,448.59										335
Grand Total .....	4,556,155		\$9,338,059.69	\$ 2,049	\$1,527,268.00	\$ .335	\$7,610,791.69**	\$ 1,670	\$200,000	\$ .044	15	50	6	561	272

\* Includes funds for Training Centers (10 Centers—One Lab.) Total \$24,700  
 \*\* Local Appropriation includes balance (brought forward) of \$383,646.73 from fiscal year 1969-63  
 Mental Health personnel transferred to State Department of Mental Health 7/1/63—Mental Health funds allocated to Local Health Departments in 1962-63 amounted to \$687,066 Local; \$333,409 State; and \$17,461 Federal.  
 The Local breakdown of individual counties in Districts does not include any special funds, extra funds or balances.  
 The State breakdown of individual counties in Districts does not include Retirement Incentive or Training funds.  
 Personnel paid from Special Project funds not included.  
 (R) Revised Local Amount downward to support Mental Health program effective 11/1/63

b — Service District—with Health Director  
 d — Public Health Nursing Director  
 ds — Director of Sanitation Activities  
 s — Public Health Nursing Supervisor & San. Supv.  
 r — Veterinarian  
 i — Public Health Investigator  
 P.T. — Physical Therapist  
 b — Bacteriologist  
 d — Dentist  
 ed — Health Educator  
 n — Nutritionist  
 t — Technician  
 a.a. — Admn. Assistant  
 Ex — Exclusive of  
 C. — Charlotte  
 R. M. — Rocky Mount

Departments	Under Local Gov. Retirement	Contract Travel Plan	Per Capita Buying Income 1962	Per Capita Local Approp.	Dental Deduction	Type of Audit	Days Work Week	On Minimum of M. S. Stand. Pay Plan
Alamance	Yes	1 Co.						
Alleg-Ashe-Watauga	Yes	3 Cos.						
Allegany			\$ 1,884	\$ 1,776	\$	Monthly Audit	5½	Yes 1 Co.
Ashe			1,291	.942		Annual Audit	5 Each	Yes 3 Cos.
Watauga			1,076	.668		Annual Audit		
Anson	Yes	1 Co.	1,227	.818		Annual Audit		
Avoy	Yes	1 Co.	1,061	2.106		Monthly Audit	5½	
Beaufort	Yes	1 Co.	1,088	.682	53	Monthly Audit	5	
Bertie	Yes	1 Co.	1,104	1.462	384	Monthly Audit	5	Yes 1 Co.
Bladen	Yes	1 Co.	910	1.091		Monthly Audit	5½	
Brunswick	Yes	1 Co.	955	1.251		Monthly Audit	5	
Buncombe	Yes	1 Co.	1,057	1.546		Monthly Audit	5½	
Burke	Yes	1 Co.	1,866	3.149		Monthly Audit	5	Yes 1 Co.
Calhoun	Yes	1 Co.	1,568	1.313		Monthly Audit	5½	Yes 1 Co.
Caldwell	Yes	1 Co.	1,685	1.865		Monthly Audit	5	Yes 1 Co.
Carteret	Yes	1 Co.	1,374	.856		Monthly Audit	5½	
Catawba-Lincoln-Alex.	Yes	1 Co.	1,552	1.198	131	Monthly Audit	5+	Yes 1 Co.
Catawba	Yes	3 Cos.		1.403	1,155	Annual Audit	5 Each	Yes 3 Cos.
Lincoln			1,711	1.283		Annual Audit		
Alexander			1,363	1.283		Annual Audit		
Cherokee-Clay-Graham	Yes	3 Cos.	1,277	1.283		Monthly Audit		
Cherokee				1.358		Monthly Audit		
Clay			1,081	1.120		Monthly Audit	5 Each	
Graham			927	1.104		Monthly Audit		
Cleveland			940	1.264		Monthly Audit		
Columbus			1,357	1.143		Monthly Audit		
Craven	Yes	1 Co.	1,109	1.079		Monthly Audit	5½	Yes 1 Co.
Cumberland	Yes	1 Co.	1,383	1.164		Annual Audit	5	Yes 1 Co.
Currituck			1,439	1.117		Monthly Audit	5½	Yes 1 Co.
Dare	Yes	1 Co.	1,346	1.567		Monthly Audit	5	
			1,387	2.968		Annual Audit	5	

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Departments	Under Local Gov. Retirement	Contract Travel Plan	Per Capita Buying Income 1962	Per Capita Local Approp.	Dental Deduction	Type of Audit	Days Work Week	On Minimum of M. S. Stand. Pay Plan
Mitchell-Yancey	Yes	2 Cos.						
Mitchell								
Yancey		7¢		.888	110	Monthly Audit	5 Each	Yes
		7¢	1.165	.495		Monthly Audit		
		7¢	1.110	.714		Monthly Audit		
Montgomery		30 + 4¢	1.230	1.112		Monthly Audit	5	
Moore	Yes	1 Co.	1.514	1.236		Monthly Audit	5½	Yes
Nash	Yes	1 Co.	1.282	1.074		Monthly Audit	5	1 Co.
New Hanover		30 + 4¢		2.325		Annual Audit	5	
Northampton	Yes	7¢	1.666	1.293		Monthly Audit	5	
Onslow	Yes	7¢	904	1.293		Monthly Audit	5½	
Orange-P-C-Lee-Caswell	Yes	5 Cos.	1.462	.814		Monthly Audit	5	
Orange		30 + 4¢		1.641		Monthly Audit	5 Each	Yes
Person		30 + 4¢	1.876	1.082		Monthly Audit		
Person		30 + 4¢	1.165	1.175		Monthly Audit		
Chatham		30 + 4¢	1.203	.971		Monthly Audit		
Lee		30 + 4¢	1.474	.979		Monthly Audit		
Caswell		30 + 4¢	1.022	.879		Monthly Audit		
Pamlico	Yes	20 + 7¢	1.036	1.582		Annual Audit	5	Yes
Pasq-crq-Camden-Chowan	Yes	4 Cos.		1.199	276	Annual Audit	5 Each	1 Co.
Pasquotank		30 + 4¢	1.410	1.230		Annual Audit		
Perquimans		30 + 4¢	1.083	1.121		Annual Audit		
Camden		30 + 4¢	1.039	1.121		Annual Audit		
Chowan		30 + 4¢	1.068	1.121		Annual Audit		
Pender	Yes	8¢	919	1.233		Monthly Audit	5	
Pitt	Yes	15 + 7¢	1.196	1.395	252	Monthly Audit	5	
Randolph		7¢	1.631	1.005	382	Annual Audit	5½	
Richmond		30 + 4¢	1.371	1.042		Monthly Audit	5½	Yes
Robeson	Yes	1 Co.		.835		Monthly Audit	5	1 Co.
Rockingham	Yes	1 Co.	941	1.125		Monthly Audit	5	
Rowan	Yes	1 Co.	1.531	1.289		Monthly Audit	5½	
Rutherford-Polk	Yes	2 Cos.	1.689	.903		Annual Audit	5 Each	Yes
Rutherford		40 + 4¢	1.401	.768		Annual Audit		2 Cos.

Polk		40 + 4¢	1,619	.785		Annual Audit		
Sampson	Yes 1 Co.	7¢	1,007	.956		Monthly Audit	5	
Scotland	Yes 1 Co.	flat	1,038	1,802		Monthly Audit	5	
Stanly		30 + 4¢	1,485	1,258		Monthly Audit	5½	
Stokes	Yes 1 Co.	15 + 7¢	1,219	1,770		Monthly Audit	5	Yes 1 Co.
Surry	Yes 1 Co.	7¢	1,426	1,537		Monthly Audit	5	Yes 1 Co.
Transylvania	Yes 1 Co.	7¢	1,532	1,184		Monthly Audit	5	Yes 1 Co.
Tyrrell-Washington	Yes 2 Cos.	30 + 4¢		1,605		Annual Audit	5	Yes 2 Cos.
Tyrrell		30 + 4¢	912	1,106		Annual Audit	5	
Washington		30 + 4¢	1,142	1,110		Annual Audit	5½	
Union		7¢	1,316	1,405		Annual Audit	5½	Yes 1 Co.
Vance	Yes 1 Co.	30 + 4¢	1,233	1,114		Monthly Audit	5	Yes 1 Co.
Wake	Yes 1 Co.	7¢	1,938	1,378		Annual Audit	5	Yes 1 Co.
Warren		30 + 4¢	906	1,102		Monthly Audit	5½	
Wayne	Yes 1 Co.	7¢	1,237	1,503	750	Annual Audit	5	
Wilkes	Yes 1 Co.	7¢	1,215	.465		Monthly Audit	5½	Yes 1 Co.
Wilson	Yes 1 Co.	7¢	1,307	1,487		Monthly Audit	5	
Charlotte	Yes 1 City	40 + 4¢	2,339	4,265		Monthly Audit	5	Yes 1 City
Rocky Mount		flat	1,764	2,031		Monthly Audit	5½	Yes 1 City
Total	81 Cos. - 1 City		\$ 1,522*	\$ 1,670**	\$ 3,493			53 Cos.-2 Cities

\* Per capita buying income for state of N. C.

\*\* Per capita local appropriation for health. For counties excluding cities \$1.547.

Departments	Cancer	Chronic Illness	Heart	Premature Services	Crippled Children	M C H	Total
Alamance .....	\$ 5,988.81	\$ 1,202.33	\$	\$ 2,071.05	\$ 15,681.95	\$ 2,296.56	\$ 27,240.70
Alleg-Ashe-Watauga .....		9,644.30					9,644.30
Alleghany .....	0			589.24	2,551.21	57.63	3,198.08
Ashe .....	1,527.92				6,243.00	120.57	7,891.49
Watauga .....	61.32				4,832.45	595.37	5,543.14
Anson .....	1,852.52				9,042.30	1,145.96	12,040.78
Avery .....	135.36				3,630.73	87.02	3,853.11
Beaufort .....	3,437.72			603.54	7,486.85	2,772.64	19,691.85
Bertie .....	1,789.50	5,340.90		2,587.00	5,400.90	96.89	9,374.29
Bladen .....	1,560.76			944.18	7,179.34	491.71	10,175.39
Brunswick .....	1,120.36	3,779.34		2,311.55	5,500.84	2,708.14	16,420.23
Buncombe .....	3,936.95			29,080.92	27,107.72	2,599.47	62,725.06
Burke .....	360.96	4,913.91			8,370.32	1,110.82	14,756.01
Cabarrus .....	2,759.91	7,236.90	3,101.53		14,488.91	1,973.04	29,560.29
Caldwell .....	443.52				17,201.53	228.05	17,873.10
Carteret .....	1,328.09			1,944.81	6,140.39	98.00	9,511.29
Catawba-Lin-Alex .....							
Catawba .....	1,643.69			2,571.86	7,234.80	1,230.46	12,680.81
Lincoln .....	55.62			402.08	3,627.51	843.73	4,928.94
Alexander .....	67.68				6,020.63	64.64	6,152.95
Cherokee-Clay-Graham .....							
Cherokee .....	1,040.33				2,395.80	100.17	3,536.30
Clay .....	0				1,565.09	291.81	1,856.90
Graham .....	0			1,256.90	3,198.12	118.52	4,473.54
Cleveland .....	1,024.26				12,789.76	1,031.24	14,845.26
Columbus .....	4,927.65			4,911.78	14,011.73	1,975.75	25,826.91
Craven .....	2,932.71	5,491.87			11,916.79	1,389.78	21,731.15
Cumberland .....	6,220.47			1,263.53	29,113.99	687.40	37,255.39
Currituck .....					515.19	19.56	534.75
Dare .....	1,044.73				363.19	17.25	1,425.17
Davidson .....	2,170.14				13,087.83	30.96	15,288.93
David-Yadkin .....							
David .....	449.70				2,451.98	30.00	2,931.68
Yadkin .....	539.88				3,967.84	376.56	4,884.28
Duplin .....	1,970.21			12,103.95	7,881.30	67.19	22,022.65
Durham .....	13,817.77			31,912.51	26,261.20	5,431.21	75,422.69
Edgecombe (Ex. R.M.) .....	3,245.31				22,115.20	2,344.05	28,004.56
Forsyth .....	4,368.04	6,960.77		10,144.78	15,285.89	2,602.37	39,361.85
Franklin .....	2,750.85			4,033.20	6,218.40	234.40	13,256.85



Gaston .....	4,730.47	3,137.32	18,892.82	2,331.57	29,092.18
Granville .....	4,469.38	3,252.37	7,880.01	2,780.51	18,332.27
Greene .....	882.97	2,327.58	4,101.24	962.74	8,274.53
Guilford .....	8,435.76	2,933.59	38,979.94	10,476.34	68,615.37
Halifax .....	2,686.09	2,587.76	13,886.45	3,297.77	30,099.65
Harnett .....	4,679.93	7,212.53	10,770.13	2,523.66	25,186.25
Haywood .....	861.08		3,821.27	327.83	4,010.18
Henderson .....	750.72	835.88	7,426.23	212.26	9,225.09
Hertford-Gates .....					
Hertford .....	1,062.63		5,413.26	598.77	7,074.66
Gates .....	1,117.52		1,037.67	118.94	2,274.13
Hoke .....	2,151.40		4,321.08	153.43	6,823.91
Hyde .....	82.72		635.62	51.60	769.94
Iredell .....	1,785.26		20,024.24	1,076.94	22,886.44
Jackson-Macon-Swain .....					
Jackson .....	84.96		2,257.20	431.64	2,773.80
Macon .....	134.61		2,635.01	513.60	3,283.22
Swain .....	48.00		3,670.32	312.97	4,031.29
Johnston .....	3,805.48	5,193.38	31,111.98	1,992.02	42,102.86
Jones .....	635.03	204.64	1,945.39	754.36	3,539.42
Lenoir .....	2,516.55	2,025.57	18,747.28	2,564.44	25,853.84
McDowell .....	631.12		9,671.89	23.75	10,326.76
Madison .....	460.15	3,612.73	3,799.83	988.74	8,861.45
Martin .....	1,535.18	7,449.42	5,855.86	1,431.48	16,271.94
Mecklenburg (Ex. C.) .....	23,337.41		53,227.33	2,292.09	73,876.83
Mitchell-Yancey .....					
Mitchell .....	51.00	942.08	4,852.88	28.50	5,874.46
Yancey .....	540.26		11,043.66	31.25	11,615.17
Montgomery .....	604.28	2,836.67	7,106.28	51.42	10,598.65
Moore .....	2,540.32	59.38	16,428.24	707.26	19,735.20
Nash (Ex. R.M.) .....	3,527.27	2,645.37	14,492.97	2,355.07	23,020.68
New Hanover .....	3,789.20	6,533.78	11,624.31	2,909.20	37,635.02
Northampton .....	2,976.08		4,566.72	1,618.69	9,161.49
Onslow .....	1,634.89		11,235.31	273.79	13,143.99
Orange-Person-C-L-Caswell .....		10,075.74			
Orange .....	4,886.49		16,795.24	22,635.70	31,224.91
Person .....	4,623.05		13,973.31	1,139.36	24,787.91
Chatham .....	1,040.33		6,699.46	587.00	12,512.87
Lee .....	1,996.15		7,078.30	721.19	12,807.10
Caswell .....	836.75		3,908.14	1,301.56	6,298.44
Pamlico .....	633.64	949.47	2,046.96	1,496.81	4,974.41
Pasq-Pern-C-Chowan .....					
Pasquotank .....	1,204.48		2,465.85	1,900.73	5,571.06
Perquimans .....	412.44		852.41	983.38	2,250.23
Candea .....	27.00		87.57	9.00	123.57
Chowan .....	0	1,411.19	1,452.17	1,225.73	3,689.09
Pender .....	523.43	830.60	2,513.80	82.69	4,050.52

Departments	Cancer	Chronic Illness	Heart	Premature Services	Crippled Children	M C II	Total
Pitt .....	7,122.91	3,430.83		1,197.67	21,679.86	2,989.36	36,420.63
Randolph .....	757.13	8,948.52		6.00	8,867.48	180.61	18,753.74
Richmond .....	2,687.17				18,004.72	197.01	20,888.90
Robeson .....	9,188.34			1,851.27	37,103.80	2,554.59	50,698.20
Rockingham .....	1,328.65				11,254.40	1,112.56	13,895.61
Rowan .....	9,196.23				18,296.42	2,508.42	30,001.07
Rutherford-Polk .....		6,126.27					6,126.27
Rutherford .....	945.16			1,591.26	8,927.19	1,067.31	12,530.92
Polk .....	2,186.60				1,708.11	1,641.36	5,536.07
Sampson .....	6,964.28			7,363.13	12,546.39	995.50	27,869.30
Scotland .....	1,283.68				12,934.41	1,217.34	15,435.43
Stanly .....	529.25				8,829.02	12.16	9,370.43
Stokes .....	956.24				3,716.87	72.39	4,745.50
Surry .....	707.88	3,089.08		1,572.24	10,497.03	2,887.61	18,753.84
Transylvania .....	1,299.66			121.20	2,738.87	89.00	4,248.73
Tyrrell-Washington .....							
Tyrrell .....	285.77				611.65	102.45	999.87
Washington .....	817.17				1,801.30	35.74	2,674.21
Union .....	939.88				9,349.48	343.69	10,633.05
Vance .....	1,477.32				8,750.74	1,073.80	11,302.06
Wake .....	6,882.40	5,520.36	500.00	5,534.04	44,800.31	6,516.72	69,753.83
Warren .....	2,912.77	4,044.30		3,860.74	3,526.55	1,128.61	15,472.97
Wayne .....	2,069.19				19,591.34	1,162.18	22,822.71
Wilkes .....	2,697.56			2,224.00	9,145.54	0	14,067.10
Wilson .....	1,181.93	7,609.90		3,408.27	11,034.11	1,022.43	24,256.64
Charlotte .....		824.00	19,203.87			2,297.50	22,325.37
Rocky Mount .....						998.75	998.75
Total .....	\$286,044.79	\$113,108.69	\$ 43,636.38	\$216,942.12	\$1,025,194.29*	\$121,571.87	\$1,756,498.14*

\* Includes \$91.39 for Non Res.

**Biennial Report****THE DIVISION OF ORAL HYGIENE****July 1, 1962-June 30, 1964**

The basis for dentistry in public health was developed between 1900 and 1920. Studies of the oral health of school children during this period indicated the appalling neglect of, and need for, dental care. The first programs of dental public health were directed toward the promotion of dental treatment for all children and the organization of facilities to provide care for children from indigent families.

The first clearly identifiable dental public health program was created by the North Carolina State Board of Health in 1918. This program, reflecting the times, emphasized the provision of corrective dental services for the children of rural North Carolina. This program was supplemented by a state-wide program of dental health education.

Dental public health programs began (as did many other programs) as treatment programs, and were based largely on empirical rather than sound scientific bases. Until recently, it was taught that proper tooth-brushing would reduce dental decay; scientific evidence has proved this assumption false. As various types of dental programs were developed throughout the nation and world, a unique body of knowledge was accumulated and special skills of public health dentistry were identified. In keeping with the changing times, the efforts of the Oral Hygiene Division have been directed toward utilizing newer scientific methods, skills, and knowledge in the promotion of a state-wide dental health program.

Through the years the Division has held that in order to improve the dental health of the people of the state it is necessary to educate the masses: first, to the importance of dental health; secondly to motivate the individual to accept responsibility for maintaining his health.

Because of the limited staff of dentists and funds to finance a state-wide program of dental health, the program cannot be presented effectively in every county in the state each year. During this biennium, fewer counties received the program, but for longer periods of time. In 1962-63, forty-six counties received the Division's dental program for an average of 16.8 weeks. In 1963-64, forty-one counties received the program for an average of 23.3 weeks. Surveys conducted in 1963-64 have proved the value of a full-time, continuing, program of dental health education. The number of children needing dental care in those counties providing full-time programs was 10% less than in counties which did not have full-time programs.

During the early years the major emphasis in dental health programs was upon dental care (relief of pain) which usually required extractions, permanent fillings to a lesser degree, and a minor emphasis upon education. Statistics show that the children treated during this period averaged about 1½ teeth extracted for each permanent filling. Within recent years this trend has been gradually reversed. We now place about 1½ permanent restorations for each tooth extracted. During these years the major

emphasis has also shifted from the relief of pain and restorative services to education and preventive services.

From the unique body of knowledge of dental public health, collected over the years, we have been able to define the dental problems of the masses of people more adequately, and to define the role of the public health dentist who is engaged in the practice of dental public health; thereby utilizing his time and efforts more effectively. From analysis and evaluation of the various components of our program during this biennium, we are convinced that additional changes should be made in keeping with current findings. We believe our major efforts should be directed toward the promotion of a more concentrated dental health educational program and the utilization of more preventive procedures, such as the various uses of fluoride.

We are aware that facilities and resources for providing clinical, preventive, and restorative services should be made available to all. The actual providing of care is not the responsibility of the public health dentist, but that of the private practitioner. Convincing evidence is available that restorative procedures will not, in themselves, do much to improve the dental health of the masses. There must be full utilization of education, prevention, and restorative services if we expect to improve dental health.

Despite the scientific knowledge which shows that dental diseases can be prevented and controlled, some continue to hold concepts that the public health dentist should direct his efforts chiefly to restorative services, and to a lesser degree to the application of preventive and educational services.

Knowledge gained through our experience, study, and practice dictate that if the available limited dental personnel is to be effectively used and greater benefits provided the children, we must address ourselves to the promotion of a dental health education program, supplemented with as many dental preventive procedures as time will permit, leaving the more costly and time-consuming restorative procedures to the private practitioner.

The need for more dentists, trained in the practice of public health dentistry, remains our most urgent need. The one dental health educator on our staff finds her task of providing the materials, consultations, and programs for classroom teachers, public health nurses, and others, far greater than one person can meet. Our request to the legislature for additional funds to finance the employment of five dentists, one dental health educator, two dental hygienists, and two clerks will enable our Division to provide a dental program to many of the counties not presently receiving the program.

The following is a statistical report of budget and services during this biennium.

## DIVISION OF ORAL HYGIENE

### BUDGET

	<u>1962-63</u>	<u>1963-64</u>
<b>Sources of Funds Expended</b>		
General Fund .....	\$167,863	\$193,616
Departmental Receipts .....	91,662	94,393
Federal Funds .....	47,306	74,877
<b>Total Funds Expended .....</b>	<u><u>\$306,831</u></u>	<u><u>\$362,886</u></u>

### PERFORMANCE STATISTICS

Average Number of School Dentists on Staff .....	19.52	20.59
Average Number Total Personnel (including dentists) .....	27.81	32.32
Number of Counties Receiving Dental Programs .....	46	41
Number of Weeks, Services to Counties .....	776	957
Number of Weeks, Services to Institutions, etc .....	49	49
Number of Puppet Show Performances .....	435	461
Number of Children Attending Puppet Shows .....	142,855	142,678
Number of Schools Visited by Dentists .....	320	489
Number of Lectures Given in Schools .....	2,655	3,136
Number of Children Attending Lectures .....	79,460	91,949
Number of Mouth Inspections .....	87,887	90,770
Number of Children Needing Dental Care .....	56,129	58,553
Number of Children Referred to Private Practitioners .....	29,956	31,735
Number of Indigent Children Treated .....	21,761	19,949

### ITEMIZED TREATMENTS

Amalgam Fillings .....	22,988	23,988
Silicate Fillings .....	1,773	1,673
Cement Bases .....	5,757	9,839
Prophylaxes .....	18,950	16,822
Topical Fluoride Treatments .....	2,553	3,761
Teeth Extracted: Deciduous .....	17,047	16,058
Teeth Extracted: Permanent .....	6,895	5,839
Silver Nitrate Treatments .....	12,249	6,935
Other Operations .....	2,292	2,174
<b>Total Operations .....</b>	<u><u>90,504</u></u>	<u><u>87,089</u></u>

## Biennial Report

# PERSONAL HEALTH DIVISION

July 1, 1962-June 30, 1964

### CANCER SECTION

The four activities of the State Cancer Program can be summarized as follows:

I. Clinics (Detection and Diagnostic): Twenty-two (including two branches) detection clinics were in operation at the close of the biennium. Yearly attendance was approximately 12,000 patients. The six Diagnostic Clinics (Asheville, Durham, Greensboro, Rocky Mount, Rutherfordton, and Wilmington) where suspected cancer in detection clinic patients is referred for confirmation by biopsy or otherwise, averaged an attendance of 500 to 600 patients yearly. It is interesting that positive cancer was found in approximately 1½% of the patients coming to the Detection clinics, and in 18% of those referred to the diagnostic clinics. (See Table I). The overall average in the two types of clinics was 3% in 1963 and approximately the same for several recent years.

The clinics (detection and diagnostic) are quite fully populated on clinic days. They have been placed where requested, if probable patient loads seem sufficient to justify them. Not every site needs a weekly clinic; demand is often most urgent and productive in a rural county needing only one clinic per month. The diagnostic clinics meet weekly, usually on the same afternoon when its associated detection clinic meets in the morning. A classification of the twenty-two present clinics on the basis of clinic sessions per month is as follows: Meeting weekly: Jackson, Lincoln, Wake, Wilkes-Alleghany, Buncombe (closed 6-30-64), Durham, Guilford, Edgecombe-Nash, Rutherford, and New Hanover. Meeting bimonthly: Chatham, Cleveland, Craven, Randolph, Scotland. Meeting once per month: Avery, Bertie, Cherokee-Clay, Columbus, Franklin, Northeastern, Polk and Swain.

The Buncombe County clinic closed June 30, 1963 after fifteen years of distinguished service rendered to the community. Altogether seventy-five doctors served it as clinic physician for periods of one to ten years each. During these fifteen years 20,764 patients were seen in the clinic and 720 were diagnosed cancer (2.9%). For the last eight of these years, the clinic averaged 1,525 patients per year, or 128 per month, 32 per clinic. In the year preceding its close, the average was twenty-six (26) patients per clinic, of whom 2.2% were proven to have cancer. This is a notable record. It is generally recognized that these clinic patients are largely from the indigent group and as such do not ordinarily go, voluntarily, to a physician's office. In the future, unless hospital clinics gather them in, in the early stages, much curable cancer will be neglected until too late for cure.

II. Hospitalization for Diagnosis (3 days) is approved for the indigent patients for whom his physician requests its provision. These patients are routinely approved for further hospitalization for treatment if requested. It is interesting that every year approximately fifty per cent (50%) of those

admitted for three-day diagnosis are proven to be cancerous. In the two budget years 1961-63, there were 1,850 patients so admitted. The expenses of this program were paid largely from Federal funds. Average cost per patient was \$48.50 in 1961-62, \$63.00 in 1962-63. The total admissions in the twelve year period 1951-63 were 7,099. The present level of the patient load is at the level of 900 per year, costing \$57,000.

**III. Hospitalization for Treatment:** In the same twelve years of the operation of this program for indigent cancer patients, the total number of admissions for treatment was also 7,251, 768 of them 1962-63. The cost per patient is now running slightly over \$200 each. Treatment costs are paid entirely from the State appropriation. The number of hospitals approved for cancer surgery now number seventy-two (72). Approximately three-fourths of the admissions are to the hospitals of the three medical school centers.

The portion of the State funds available for providing hospital treatment for cancer patients is now at the level of \$140,000-\$160,00 annually, this covering cost for 700-800 patients. It was the experience in eight years of the period 1953-62 that the appropriated State funds for hospital care were exhausted after passage of eight to nine months of the fiscal year. This annual financial crisis in the program always leads to stoppage of all hospital admissions for three to four months in each year, a rather desperate development for a life saving procedure. In the two years of the biennium just closed, the program was carried on throughout the whole of each year due to emergency allocation of State funds to cover the deficit when it appeared. The actual dollar needs have been clearly delineated in the experience of these two years.

**IV.** The program of seminars in Cancer Control presented to physicians in county medical society meetings, has been continued in this biennium, in cooperation with the extra-mural teaching program of the School of Medicine of the University of North Carolina in Chapel Hill. These programs feature the Papanicolaou test, as a method capable of eliminating cervical cancer, as a cause of death if adequately used. Since cervical cancer is the chief cause of death of women of child bearing age, an all out effort to extend this saving technique seems mandatory. The positive Papanicolaou test when confirmed by cervical biopsy alerts the physician and patient to the probabilities involved. Cancer in-situ may admit of watchful waiting; evident cancer should not.

**V.** Table II presents the results of Papanicolaou examinations made at the State Board of Health, Laboratory Division, during the two years. The increase of 10,000 in the number of slides examined in the second year shown, is already equaled in another increase to 62,901 in the 1963-64 fiscal year. The ten laboratory cytologists are already working at capacity and delayed reporting will begin to creep in, necessarily in the near future.

A very compelling figure in Table II is the high percentage of cytology positives shown in prenatal clinics where the test has been introduced. It is almost as high as that for the state institutions where an aging population is not at all a comparable group. This prenatal group is the one where cancer prevention can most profitably be introduced. It is the one where

cervical cancer is most prevalent, all out of proportion to the expected incidence for this age group.

**TABLE I**  
**N. C. State Cancer Clinics**  
**Patients Examined and Cancer Found**  
**January 1962-December 1963**

	1962			1963		
	No. of Patients	Cancer Found	% Positive	No. of Patients	Cancer Found	% Positive
Detection Clinics (22)	11,879	250	1.26	11,287	272	1.52
Diagnostic Clinics (5)	625	116	18.56	480	88	18.33
Total Detection and Diagnostic	12,504	366	2.9	11,767	360	3.0

**TABLE II**  
**Cytology Laboratory**  
**State Board of Health Laboratory Division**  
**Papanicolaou Slide Examinations**  
**January 1962-December, 1963**

Source of Slides	1962					1963				
	Slides Examined	No. +	% +	No. Susp.	% Susp.	Slides Examined	No. +	% +	No. Susp.	% Susp.
From Clinics	11,337	118	1.04	110	.97	10,242	119	1.16	74	0.73
Private Physicians	32,192	470	1.46	525	1.76	33,984	427	1.26	483	1.42
State Institutions	—	—	—	—	—	4,443	122	2.74	89	2.
State Prenatal Cl.	—	—	—	—	—	4,672	71	1.52	90	1.92
Total	43,529	588	1.35	635	1.46	53,341	739	1.38	737	1.38

### CLINIC ATTENDANCE

#### Average Number of Patients at Cancer Clinics

No. of Patients Per Clinic	Name of Clinic with average attendance at each (parenthesis).
<b>1962</b>	
Under 10	Franklin (7), Wilkes (6)
10-19	Avery (15), Cleveland (12), Guilford (15), Randolph (11), Rutherford (13), Wake (14)
20-25	Bertie (20), Cherokee (21), Craven (20), New Hanover (20), Northeastern (21), Scotland (20)
25-29	Buncombe (28), Lincoln (28), Durham (27), Edgecombe (25)
<b>1963</b>	
Under 10	Franklin (9), Wilkes (5)
10-19	Bertie (14), Cherokee (18), Cleveland (11), Craven (15), Guilford (15), Lincoln (18), New Hanover (18), Randolph (16), Rutherford (11), Scotland (19), Wake (16)
20-25	Avery (22), Chatham (20), Northeastern (22)
25-29	Buncombe (26), Durham (27), Edgecombe (25), Jackson (30)



## CHRONIC DISEASE SECTION

The Chronic Disease Program is described at its best in its program for Home Care of the chronically ill at home. This program is developing slowly and deepening its penetration in public health practice as it wins the approval of physicians and the general public. Once understood in these areas it becomes an ally of the physician, the health director and his staff, as well as the chronically ill at home. Properly applied it relieves the hospital of requests for care of patients needing hospital facilities only occasionally. It permits patients to avoid unnecessary hospital expense, and to recover in the home environment, and it frequently spares the community budget this expense for the indigent.

The basis of the program is that of aiding the County Health Department to render this service with the employment of extra nurses, and providing physical therapists on a whole time, part time or fee basis, both working in every instance under the supervision of the patient's personal physician. Other para-medical services are made available where needed and where available. The chief accomplishment is achieved with patients, possibly neglected ones, for whom improvement under guided home therapy is possible. A leading diagnosis in home care patients is "stroke". Restoration to self care or rehabilitation to partial or full employment is the goal.

The home care programs are carried out in North Carolina through the staff of local health departments. All ages are eligible; every one must be referred to or supervised through the Health Department by a local physician. As of June 30, 1964, 24 counties had signed contracts with the Board of Health for this program. One county (Guilford) has already taken over locally the full cost of the program.

Federal formula funds are still carrying the full cost to the State of this program. Local participation in cost begins in the second or third years. (It started October 1961.) This local support will need to increase if expansion into new areas is to go forward.

A list of counties now included in the Home Care of the Chronically Ill programs as of July 1964 includes twenty-three counties: Alamance, Alleghany, Ashe, Avery, Beaufort, Bertie, Brunswick, Burke, Cabarrus, Craven, Durham, Forsyth, Guilford, New Hanover, Person, Pitt, Randolph, Rutherford, Surry, Tyrrell, Wake, Watauga, and Wilson. The level of activities in these counties varies widely. Slow beginnings for such a new service seemed inescapable, but improvement in quality and quantity is implicit for every one. The total budgeted expense for all counties is now at the \$240,000 annual level.

In addition the Chronic Disease Section provides the budget for the **Nursing Homes Section** of the State Board of Health as now administered, but these funds are badly needed for expansion of the Home Care Program into other counties. The Board of Health program for diabetes detection is proceeding in thirty counties. In 1962-63 approximately 14,000 examinations and in 1963-64 15,000 examinations were made, with 109 diabetics (.78%) found the first year and 114 (.76%) the second year.

For eighteen months preceding July 1, 1964, a developmental grant from Public Health Service made possible a thorough going study of the

neurological diseases sector of the chronically ill in North Carolina. Starting July 1, 1964 a Public Health Service Project grant was approved, designed to make operative a program for the Control of Convulsive Disorders and related neurological diseases in the State. In establishing this program, an Advisory Committee composed of five neurologists from five medical centers has guided the planning for this project, and will continue to advise on its introduction as an on going program. The Public Health Service has assigned a Program Representative from its staff, who will act as coordinator for the activity. The objective of the program is "to develop a statewide service to insure the maximum application of available knowledge, facilities and personnel for the prevention, diagnosis, treatment and after care of children and adults suffering from convulsive disorders and other significant neurological diseases". Case finding and diagnosis will be the function of the program, with follow-up of all and referral, when indicated, for more intensive study. No provision of hospitalization is included. All patients will be at all times under supervision of local county practitioners.

### CRIPPLED CHILDREN'S SECTION

The annual statistical report for the calendar year 1962 reflected clinic service for 15,158 children with 31,789 clinic visits; 2,142 patients hospitalized for 24,956 days; and 10 boarding home cases for 189 days, with a total unduplicated count of 16,654 patients. In early 1963 the support of the orthopedic clinic in the Orange County Health Department was discontinued due to the small number of patients in attendance, and the availability of the N. C. Memorial Clinic at nominal cost to the patients. The health departments of the district involved were notified that their patients could attend their choice of three other state supported clinics not too difficult of access.

On July 1, 1963, the State Medical Society's Relative Value Study was adopted as the basis for our schedule of fees for clinicians with multiple of 2 for surgery, 3 for medical service and examinations, and 4 for x-rays and laboratory procedures.

In October 1963, the Section announced its support of cystic fibrosis and other inborn errors of metabolism in the areas of clinic diagnosis and observation, hospitalization when indicated, and medication. By January 31, 1963, sixty-five cases were under observation and treatment. A plan for the support of convulsive seizures was elaborated in late 1963 and accepted by the Children's Bureau. The service accorded is that of clinic evaluation and observation, hospitalization for study, for surgery when indicated and of medication. The Section has supported for many years brain surgery for such epileptics as have been considered amenable to it. The plan contemplates the establishment of centers in seven locations including the three teaching institutions in two of which service under Section support is now under way.

From July 1, 1963, to January 1, 1964, 1,624 overage or inactive records were removed from the files. A review of these revealed, again, that many patients become delinquent and did not follow through with treatment recommended and that follow up of patients is the most inadequately

carried out function of our service. County health departments continue to receive reports of every service supported and of clinicians' recommendations for the continuance of treatment.

On January 1, 1964, the Section initiated the use of diagnostic codes based on the International Classification of Diseases. Future statistical reports will be made under this coding and the necessity for the use of "basket" codes largely eliminated.

The annual statistical report for 1963 showed 16,042 patients attending clinics with 32,333 visits; 1,986 hospitalized for 24,769 days; 266 private office and clinic cases with 1,291 visits, and 1,648 receiving appliances and prostheses numbering 3,986. The total unduplicated number of children examined and/or treated was 17,765, with a total cost for service and administration of \$1,096,945.21. Of this 30% was for supplies, equipment and salaries with state support approximately 14% of the total.

## HEART SECTION

The Heart Disease Control Program while continuing activities in the same four areas as in the previous biennium did expand, especially, the coverage for Stroke Programs in the State: One County (Guilford) took over completely all budget costs of the local heart program. Programs in Cabarrus and New Hanover were taken over by other funds. New programs were started in Chatham, Lee, Caswell and Greene Counties. The Mecklenburg-Charlotte Stroke Project (with State and Federal Grants) has continued its operation at three levels of diagnosis, rehabilitation and follow-up, with a medical director and a full time therapist for home and clinic service and for medical and community relations. The community acceptance of this program has been very satisfactory. In some other counties the stroke program is a predominant part in home care programs for the chronically ill. Altogether eight counties are now providing stroke programs: Caswell, Chatham, Greene, Halifax, Lee, Orange, and Mecklenburg & Warren. Caswell and Lee are at low ebb at year's end due to nurse shortage.

Professional education has been provided for physicians via short courses in electrocardiographic interpretations at a University Medical Center. Courses in pediatric cardiology are given at another center at two-three year intervals, and a cardiology course for general practitioners is offered at the third medical teaching center and will now be henceforth on an annual basis. The cumulative value of these courses for better diagnosis and treatment of heart patient is considered to be very great. In addition, some training for nurses in care of the cardiac patient is provided yearly at UNC Medical Center. Field training for student physical therapists in home care of stroke patients is provided in a very stimulating fashion by physical therapists of the Section.

Cardiovascular diagnostic laboratories have been assisted rather extensively during the biennium. This has included modernization of equipment in one heart catheterization unit, staff help for two hospital electrocardiographic units, and underwriting of a streptococcus laboratory which provides diagnostic service to the State.

Only one State heart clinic is in operation and no expansion of this program is foreseen. This clinic, in mountainous Jackson County, demonstrates exceedingly well the type of diagnostic service that can be furnished to an area where needed, if requested and local talent available and anxious to see it provided. Penicillin for indigent rheumatic heart disease patients is provided for two hospital clinics.

Plans for the new year include cooperation in overall chronically ill programs being developed in the Research Triangle area of the State; in a new type of clinic study to find stroke prone patients; and in friendly observation of home care treatment provided for congestive heart failure patients at home.

### MATERNAL AND CHILD HEALTH SECTION

The activities of the Maternal and Child Health Section can be divided into direct medical services, training programs, and special programs. There were 60,513 prenatal visits and 85,085 visits to the infant and pre-school clinics. The child evaluation clinics for retarded children saw approximately 200 children during the two-year period. The Maternal and Child Health Section provides all of the clinics with health education literature in addition to large quantities of medications. Counties received continued support in the form of items of equipment for clinic usage. The professional fees for these clinics are paid through the local health departments by the Maternal and Child Health Section.

The premature care program, although undergoing changes which have streamlined the authorization, has provide cost of hospitalization and professional fees for three to four per cent of all the prematures born in North Carolina. This care, however, is rendered to thirty per cent of the smaller premature infants which are born in the state. During the biennium a total of 433 prematures were supported by the program at a total cost of approximately \$500,000. The cost of this program has increased yearly and the average cost of care of each infant has increased so that it is now \$850. In addition to direct hospital payments, this program has also provided some 50 Isolettes during this biennium which have been distributed to various hospitals throughout the state for utilization in premature nurseries. One new feature has been added to the program in the form of training for hospital nurses at Bowman Gray School of Medicine. To date six nurses have been trained under this program and with current expectations that some twenty-four more will be trained in the next biennium.

The Maternal and Child Health Section has one obstetrical consultant, one maternal and child health nurse consultant, and one pediatric nurse consultant, all of whom were available for consultation to the individual county health departments as well as the hospitals throughout the state and to other agencies. These services primarily concern the standards of care being rendered in the various public health clinics, the quality of nursing care given in the premature units, as well as in the other nurseries in any of the hospitals throughout the state. Other agencies provided consultation include those concerned with day care and school health.

Considerable emphasis has been placed upon the training programs for professional personnel at all levels. There have been nurse and health

director conferences in at least 40 counties throughout the state concerning the problems involved in prenatal and postnatal care as well as child health supervision. There have been many conferences to discuss perinatal and infant mortality and in addition the pediatric nurse consultant has spent approximately 60 per cent of her time assisting hospitals throughout the state in developing and improving care to the newborn and premature infant. The maternal and child health nurse consultant has developed and planned many in-service county training programs for midwives.

The Maternal and Child Health Section has provided postgraduate courses for physicians at the Bowman Gray School of Medicine and Duke University School of Medicine. During the past two years these courses have been attended by some 160 physicians in the state. A highly successful conference was conducted at Chapel Hill in association with the School of Public Health concerning problems of perinatal mortality. This section has co-operated with the Mental Health Department and the Department of Psychology at the University of North Carolina in the development of an in-service training program in mental retardation that was carried out at Murdoch Center in May 1964. This is hoped to be the beginning of an ongoing program.

A number of special programs which have been in existence prior to this year were continued. The fetal and neonatal mortality study begun ten years ago has recently been terminated and the task of now analyzing all data is progressing satisfactorily. It is hoped that this will be accomplished within the next year. A further report of the Wake County Premature Infant Study has been completed by the Psychology Department of the University of North Carolina and this report is now ready for publication. The Section continued to support the annual hospital reports of fetal and neonatal deaths which are sent to each hospital in the state. This has been received very successfully and has proven very useful. There has been developed in the past two years a program at the University of North Carolina under a special grant for the study of health care of infants. Preliminary reports of this study have just recently been received and this study will be completed in the ongoing biennium. The Rutherford-Polk School Health Project will be terminated within the next year and it is hoped that a great deal of information will be available from their analysis of this study. The Guilford County Program for Field Training of Public Health Students was terminated at the end of this biennium because of a change in policy at the University of North Carolina School of Public Health.

In the past two years two new developmental evaluation centers for retarded children have been developed in Asheville and in Charlotte. These are to complement the clinics at Bowman Gray School of Medicine and the University of North Carolina, and it is hoped that within the next several months a developmental evaluation center at Duke University will be established and that teaching centers in developmental evaluation and speech therapy will be established at Western Carolina College at Cullowhee and at East Carolina College in Greenville. Under the mental retardation program there is a marked expansion in the development of demonstration and teaching for professional personnel in the field of mental retardation and it is hoped that with this expansion we will shortly have training

facilities available to develop the personnel needed in the State of North Carolina.

## NURSING HOME SECTION

At the beginning of July 1962, 45 nursing homes were licensed with a total of 1,519 beds. At the present time we have 42 nursing homes and 21 combination nursing homes and homes for the aged and infirm with a total of 2,518 nursing beds and 1,050 resident beds. These combination homes were made possible by legislative action of the 1963 General Assembly stating that "Any person may operate a nursing home . . . and a home for the aged and infirm . . . in the same building or in two or more buildings adjoining or next to each other on the same site . . . and must comply with standards prescribed by, and be licensed by, the State Board of Health." (G. S. 130-9(5)).

During this two year period, 19 homes have been licensed and one home has changed to a rest home and is licensed by the State Board of Public Welfare.

Approvals have been given for construction of 13 new nursing homes, 8 conversions and 12 additions. Fourteen of these projects have been completed.

There are currently 5 homes under construction with a total of 303 beds.

At the present time, there are 33 counties with either a nursing home, or combination nursing home and home for the aged and infirm. This leaves 67 counties with neither a nursing home nor combination home. Five of these counties either have a home under construction or approved for construction.

On January 9, 1964, Rules and Regulations for the Licensing of Nursing Homes were adopted by the members of the Board of Health and became effective as of March 1, 1964.

The Nursing Home Section developed the following projects which are currently under contract:

1. "A Demonstration Project for Introducing Recreational Therapy into Licensed Nursing Homes in North Carolina." This project began July 1, 1961 and is still under contract.

2. "A Demonstration and Training Project for Bookkeeping Personnel in Licensed Nursing Homes in the State of North Carolina to Familiarize them with the Uniform System of Accounts Established Jointly by the American Nursing Home Association and United States Public Health Service." This project began May 1, 1962 and is still under contract.

Workshops on rehabilitation and food service were held in 1964. Thirty-four nursing homes participated in these workshops.

## NUTRITION SECTION

### *Administration*

During the biennium there have been several staff changes. On August 1, 1962, Miss Elizabeth W. Jukes was appointed chief of the Nutrition Section; on September 1, Mrs. Mary Ann Farthing became assistant chief.

Job descriptions were written, approved, and incorporated into a revised policy manual.

During the biennium Miss Cooke and Miss McElreath resigned. Mrs. Marie Barbee, a former nutrition intern, joined the staff, and, as of this writing, four applicants meeting qualifications for nutritionists have been received. When these people are employed, only one nutrition consultant position will be vacant. In the interim, district assignments have been adjusted so that every county health department has access to nutrition consultation on request.

As part of the policy revision, dietary consultation is available on request to all hospitals and institutions in North Carolina regardless of their financial support. A third dietary consultant position was established and all positions are filled. Each consultant has about 70 hospitals and institutions in her area.

In January, 1963, a position description for two nutrition interns was approved, giving these interns all benefits and protection afforded all state employees.

### *Dietary Consultation*

The dietary consultants are making introductory visits to each hospital and institution in their districts. They have found multiple needs for their assistance with the food service departments and have found that administrators and food service supervisors welcome them.

The State Board of Health cosponsors, with the North Carolina Hospital and Dietetic Associations, an annual Hospital Food Service Supervisors Institute. More than 110 food service supervisors attended the eleventh and twelfth institutes. Major program emphasis in 1963 was writing job specifications for food service employees and writing therapeutic diets. In 1964, the major emphasis was administration and supervision.

The Nutrition Section has agreed to sponsor in North Carolina "A Correspondence Course for Food Service Supervisors" directed by The American Dietetic Association. The three dietary consultants and six other members of the North Carolina Dietetic Association are preceptors for twenty students. The course consists of fifteen lessons covering the major responsibilities of food service departments and must be completed in one year. Attendance at a three-day meeting during the year is a requirement for all students.

### *Crippled Children*

Nutritionists attended 174 orthopedic clinics. Some 691 patients were referred for dietary instruction. Records of the instruction are included in the patients' files and nurses were encouraged to reinforce teaching.

### *Maternal and Child Health*

Nutritionists continue to give priority to work with programs related to mothers and children. About 38% of staff time was spent on maternal and child health. In spite of the extremely small staff, nutritionists attended 184 prenatal clinics and instructed 1,061 patients; at 63 maternal and infant clinics nutritionists were referred 363 patients.

Because of the economic levels of many of the families with whom the health departments work, nutritionists have conducted educational programs for families receiving surplus foods. In Winston-Salem, the nutritionist has contributed to a monthly newsletter sent to residents of a low income housing development. Surplus food recipients were taught how to use unfamiliar and unpopular foods and what foods to buy to supplement the commodities.

A nutritionist helped to organize the Nash County Cooperative Nutrition Council whose purpose is to develop programs to help food stamp recipients improve their planning, purchasing, and preparation of foods.

In all sections of the state, instruction in the principles of economical food buying and preparation was given to workers who serve low income families.

Physical examinations of school children in widely separated counties indicate that many have low hemoglobin levels and that many are overweight. One hundred eighty-seven children and teenagers have been referred for dietary instruction. Nutritionists have also instructed groups of teenagers at the request of teachers and public health nurses.

Major nutrition education projects were conducted in Wake, Forsyth, and Buncombe Counties. In each case, the findings of food habit surveys have been used as the basis for teacher education and classroom instruction.

Consultants have supported the efforts of school personnel who attended the Nutrition Education Institute for Elementary Teachers at the University of North Carolina at Greensboro. The State Board of Health contributed \$3,000 per year to this project of the North Carolina Council on Food and Nutrition, Inc. The project has met its goal of demonstrating the value of such instruction to the ability of teachers to incorporate nutrition into classroom activities. Several teacher training institutions have plans for offering a nutrition education course in the summer of 1965.

### *Mental Retardation*

Dietary consultants continue to work with state schools for the mentally retarded and also with such private institutions as Hilltop Home in Wake County and Amos Cottage in Winston-Salem. A part-time dietitian was found for Amos Cottage. Nutritionists contribute to the understanding of problems related to eating habits of mentally retarded children and the therapeutic diets prescribed.

### *Chronic Diseases*

About 20% of time of Section staff members is spent on work with chronic diseases including diabetes, cardiovascular diseases, and obesity. The importance of nutrition in both primary and secondary prevention has been demonstrated repeatedly. Dietary consultants have emphasized the need for diet manuals in hospitals where there are no qualified dietitians in order that the physician's instructions can be followed faithfully. Nutrition consultants have helped patients to follow their diets after returning from the hospital. North Carolina Memorial Hospital referred 86 patients and Veterans Administration Hospitals referred 58 patients for assistance with their therapeutic diets.



Four series of classes to help women and teenagers with weight control were taught in Gaston, Wake, and Surry Counties.

*Educational Materials*

The following leaflets were made ready for distribution during the biennium:

For teenage girls: Going Steady with Good Nutrition  
For teenage boys: Make the Team with Good Nutrition  
Baby Coming? These Foods Are for You  
When the Doctor Says: "Cut Down on Salt"  
Milk for Everyone  
Foods to Build Red Blood  
Does Your Child Eat a Good Lunch?  
To explain the Nutrition Section program:  
    Nutrition Services  
    A Nutrition Intern in North Carolina

## SANITARY ENGINEERING DIVISION

The Sanitary Engineering Division is responsible for the non-medical activities of the State Board of Health in the field of environmental sanitation. These activities are directed primarily at groups, communities or areas, rather than service to the individual because of the wide coverage of environmental sanitation problems and programs.

The Division's objectives have been and continue to be the improvement of environmental conditions that affect the health and comfort of the people of the State. In accomplishing this, the personnel works with representatives of industry, organized community groups, professional groups, municipal and county officials, and with a large number of State agencies. The Division is being called upon more and more for technical assistance in all fields of sanitation and sanitary engineering. Our work continues with many other State agencies, which have problems related to sanitation.

During the past biennium, emphasis has been placed on the development of public water supplies and in bringing under control a number of community supplies serving villages and housing subdivisions, which are expanding rapidly in all sections of the State. Sanitation problems, created by malfunctioning septic tanks, continue to increase, requiring closer cooperation between planning and zoning boards, developers, and the local health departments. The problem of garbage and refuse collection, storage, and disposal is increasing annually as the fringe areas and urban areas develop adjacent to our municipalities. Progress has been made in this community effort, but much remains to be done. During the past biennium, six of our counties have taken advantage of the State Statute which allows the county commissioners to adopt local regulations governing the storage, collection, and disposal of refuse. These counties are: Alamance, Cumberland, Wayne, Cabarrus, Catawba, and Surry. Six additional sanitary landfills were started during the biennium at Biscoe, Canton, Highlands, West Jefferson, Whiteville, and Clinton.

During the biennium a re-organization of the Division's activities took place in order for us to better coordinate the programs of the three Sections in the Division.

A Regional Office was established in Greenville and an engineer and a sanitarian assigned to the office. A Regional Office was established in Asheboro for the Piedmont Section of the State, and one engineer and one sanitarian are presently working out of this office as headquarters. The third Regional Office in Asheville continued to function as it has in the past.

During the year 1963, the Division was interested in several pieces of legislation and actively sponsored the following bills: (1) An Act to Establish an Air Hygiene Program, (2) An Act Regulating the Sanitation of Agricultural Labor Camps, and, (3) An Act Authorizing the State Board of Health to Establish Minimum Standards for the Design, Construction, Operation and Maintenance of Public Swimming Pools. All three of these bills passed, and activities have begun in these fields. We did not receive any appropriation, however, to implement the Air Hygiene Program. The work we have done has been accomplished by part-time activities of engineers taken from other programs.

The Agricultural Labor Camp legislation, for which we have worked a number of years, has proved to be quite successful. The accomplishments gained during the past growing season have been much more than we had expected.

A brief summary of some of the more specific activities performed by the three Sections of the Division are as follows:

### *Engineering Section*

The personnel of the Engineering Section carried out a broad public health engineering program relating primarily to public water supplies, sewage treatment facilities, radiological health and air pollution. Increased emphasis was placed on promoting more and better public water and sewerage systems, and assisting water plant personnel with operating difficulties. We have assisted a number of municipalities in planning for additional sources of water that could be utilized to provide for present and anticipated demands. During the biennium, contracts were awarded for water improvements amounting to \$21,098,008 and for water and sewerage projects combined amounting to \$15,193,026. We now estimate that more than two million two hundred and fifty thousand people of the State are being served water from protected supplies that are under the supervision of the State Board of Health. Six municipalities began fluoridating their water supplies during the biennium and four new sanitary districts were formed. The boundaries of two were extended.

One of these districts deserves special mention as it is quite large. It is located in the Kannapolis area and will serve approximately 35,000 people. Because of the insanitary conditions existing in this area, due to malfunctioning septic tanks and the number of people living in the area, the creation of this district was one of our most noteworthy accomplishments. A bond issue has been acted on favorably for public water and sewerage facilities that will cost approximately six million dollars.

The towns of Kill Devil Hill and Nags Head, with which we have been working for a number of years to secure a central water supply, finally constructed their water purification plants and distribution systems; thus, providing a safe, palatable water for the most populous beach area in Dare County.

The Environmental Radiation Surveillance Program, that began in 1958, has continued with the surveillance of water, air, rainfall, and dustfall. The water surveillance program has been modified to include finished drinking water examinations from twenty-five municipalities in addition to our previous program of raw water surveillance.

The surveillance of air-borne radioactivity was carried out by locating sampling stations at various points throughout the State. The Radiation Surveillance Network of the Public Health Service, in cooperation with the Gaston County Health Department, was continued. Rainfall samples have been composited weekly and analyzed for radiation. Radiation measurements were made also on dustfall samples collected in connection with our air hygiene work.

Although the Air Pollution Program has operated under a handicap with no special appropriation and personnel, a number of stations for the

measurement of suspended particulates have been established. Special short-term air studies were made at Winston-Salem, Charlotte, Asheville, Durham, Greensboro, and High Point. Reports have been prepared, and it is planned that these will form the base on which we hope to develop more activity in the air hygiene field, if, and when, funds are made available to properly implement this program.

#### *Insect and Rodent Control Section*

Personnel of the Insect and Rodent Control Section engaged in diverse activities, due to the three major programs for which they are responsible. Visits were made to all parts of the State for special investigations or routine inspections to ascertain the location, extent, and cause of problems involving arthropods and rodents of public health significance. Corrective measures were developed and local personnel assisted in the initiation and continuation of such measures. Close liaison has been maintained with the U. S. Corps of Engineers, State Highway Commission, U. S. Soil Conservation Service, and other agencies whose operations create topographical changes, in order to prevent the creation of conditions favorable to the propagation of disease vectors. Assistance was given responsible officials in the development and application of mosquito control activities, as well as sanitation practices in recreational areas on Gaston Lake, Kerr Scott Reservoir, Lake Norman, and Tuckertown Reservoir, four large hydro-electric impoundments that were completed.

Mosquito control work consisted of adulticiding, larviciding upland drainage, and salt marsh water management. The salt marsh mosquito control program has operated very successfully during the year 1963. Fifty-one separate projects were allocated funds on a matching basis. The State's contribution in this program is two State dollars for one expended from local funds. During the year 1963, 422,426 feet of linear ditches, or 80 miles, were cut, and roughly nine miles of dikes were built. The dikes were constructed around an 800 acre impoundment in cooperation with the Wildlife Resources Commission. Therefore, this program does not consist entirely of drainage, but of salt water management also. This 800 acre lake will provide wildlife protection in Pamlico County. The major drainage work on this program has been carried on in Pamlico, Onslow, Carteret, New Hanover, Dare, and Hyde Counties.

#### *Sanitation Section*

In the field of general sanitation, which includes foodhandling, housing, milk and shellfish sanitation, emphasis has been placed again on assisting local health departments and in promoting better planning and execution of local sanitation programs.

In milk sanitation, North Carolina maintained its place as top state in the U. S. Public Health Service Honor Roll Listing, as given in Public Health Reports for September, 1963. Milk sanitation survey tabulations show that out of 86 health jurisdictions, 71 have adopted compulsory pasteurization ordinances. According to our records, only nine grade A retail raw dairies, selling 367 gallons per day of raw milk, remain. These raw dairies are located in four counties. In 96 of the 100 counties, 100% of the

market milk is pasteurized. Of the total milk sold in the State, 99.865% is pasteurized. The Division cooperated with the U. S. Public Health Service Milk Sampling Network in the examination of monthly milk samples from the Charlotte area. These were examined for radioactive Iodine 131, Strontium 90, and Strontium 89. Results of this sampling showed no detectable concentrations in Iodine 131, and the levels of Strontium were not significant.

In food, lodging and institutional sanitation, the Vending Machine Regulations became effective January 1, 1963, and 105 commissary permits have been issued since that time. A program of surveying food and lodging establishments, as well as certain institutions covered by State regulations, was started. Surveys have been made in fifty counties. The annual inspection of prison camps showed again satisfactory conditions prevailing. A number of camps have been consolidated, thus eliminating several sewage disposal problems.

Considerable activity has taken place in the shellfish sanitation program as we have attempted to expand our sampling of waters from growing areas. Through the cooperation of the Division of Commercial Fisheries of the Department of Conservation and Development, we were authorized to employ three additional persons, who will be paid by Conservation and Development. One person has been assigned to the laboratory at Morehead City; and the two others are working in the trailer laboratory, which will be moved from one shellfish growing area to another in order to speed up our surveying program. The shellfish areas surveyed during the biennium amounted to twenty-three. Special emphasis has been given to conducting shoreline surveys in an attempt to locate sources of sewage disposal from private residences. This work has been carried on with the local health departments, but it has been the primary responsibility of this Division to accomplish any results. The local sanitarians appear to be more involved with other activities and are not devoting the proper time and attention to rural sanitation activities.

As previously referred to, the Act Regulating the Sanitation of Agricultural Labor Camps was passed. With funds secured from a federal grant, a full-time sanitarian was employed to work with growers, local sanitarians, and Employment Security Commission representatives in promoting compliance with basic sanitation standards. To date, this program has been most encouraging and we look forward to considerable progress in the next biennium.

Educational activities continued. A number of foodhandlers schools were held in various sections of the State. Considerable time was spent by our staff in assisting in the training of local sanitarians, either new men entering the field, or on in-service training for those men already employed. This is a most important activity, and one that is greatly needed. During the period of this report, we co-sponsored three courses at the University of North Carolina, School of Public Health in the *Principles and Practices of Sanitation*. Forty-six men attended. A special course in *Food Sanitation* was given at North Carolina State College. Twenty-six men attended. In cooperation with the Training Branch of the Communicable Disease Center, a course on the *Epidemiology of Environmental Health*

was given at Chapel Hill. Twenty-seven men attended. Four other programs relating to (1) *The Professional Development of the Sanitarian*, (2) *Septic Tank Systems*, (3) *Planning Better Eating Places in North Carolina*, and (4) *Coordinating State and Local Sanitation Programs* were held at five different locations throughout the State. These courses were of the in-service training variety for employed sanitarians. We co-sponsored and assisted with the Dairy Fieldmen and Sanitarians' Conference at State College. Two of these courses were held during the biennium. A total of 99 sanitarians attended.

A brief numerical summary of some of the more significant activities follows:

## SANITARY ENGINEERING DIVISION

### Biennial Statistics

July 1, 1962 - June 30, 1964

Milk Plant Inspections .....	340
Dairy farm inspections .....	3216
Milk surveys completed .....	111
Special investigations (milk) .....	6
Conferences regarding milk .....	1881
Foodhandler schools held .....	30
Foodhandling establishment inspections .....	2486
School lunchroom inspections .....	396
Abattoir and meat processing plant inspections .....	76
Meat market inspections .....	967
Frozen food locker plant inspections .....	28
Poultry plant inspections .....	32
Summer camp inspections .....	27
Institution inspections .....	514
Public school inspections .....	131
Lodging place inspections .....	263
Migrant labor camp inspections .....	831
Private water supply inspections .....	4193
Private sewage disposal inspections .....	5004
Privy inspections .....	4892
Institutional water supply inspections .....	500
Institutional sewage disposal inspections .....	606
Special investigations (general sanitation) .....	165
Shellfish packing plant inspections .....	2826
Retail seafood market inspections .....	486
Patrol inspections of restricted waters .....	414
Sanitary surveys of shellfish areas .....	21
Water samples collected shellfish areas .....	2677
Plan reviews of foodhandling establishments .....	401
Plan reviews (rest homes) .....	351
Plan reviews (hospitals) .....	90
Plans distributed (all types) .....	149
County surveys of food, lodging, and private institutions .....	50
Number of court cases .....	29
Drainage problems investigated .....	474
No. of times communities assisted in planning or supervising Sanitary Landfills .....	214
Applications received for permits to impound water .....	579
Impounding permits granted .....	565
Mosquito surveys made .....	529
Arthropods identified .....	6090
No. of times communities assisted in planning or supervising insect control .....	1232
No. of times communities assisted in planning or supervising rodent control .....	172
Impounded water inspections .....	463
Refuse problems investigated .....	163
Inspections of refuse storage, collection or disposal .....	1817
Inspections of bedding factories .....	2802
Inspections of retail bedding establishments .....	14300
Pieces of bedding removed from sale .....	11973
Public water supply inspections .....	713
Well sites examined .....	333
Water samples collected (public water supplies) .....	167

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Special investigations conducted (water supplies) .....	139
Sewerage system inspections .....	17
Special investigations (sewerage systems) .....	204
Water supply plans approved .....	275
Sewage works plans approved .....	22
Sources of water supply inspected for interstate carriers .....	27
Watering points inspected .....	57
Special conferences with engineers, city and county officials, water and sewerage officials .....	4089
Special investigations (air) .....	42
Visits/assistance to local health departments and municipalities (air/radiation) ....	204
Samples collected and analyzed:	
Gross Scan—radiation (water) .....	1588
Gross Scan—radiation (food) .....	5
Gross Scan—radiation (air) .....	1238
Samples collected and analyzed:	
Air—suspended particulates .....	667
Air—dust fall .....	381
Air—other .....	3
Conferences with utility personnel, city & county officials, engineers, private individuals (radiation) .....	100
Conferences with utility personnel, city & county officials, engineers, private individuals (air) .....	291

## REPORT OF THE COMMITTEE ON POSTMORTEM MEDICOLEGAL EXAMINATIONS

The Committee on Postmortem Medicolegal Examinations is charged with the general administration of the Medical Examiner System of the State of North Carolina. This new system became available to counties of the State January 1, 1956, having been authorized by Chapter 972, Public Laws of North Carolina, 1955. This system is designed to provide modern medical and scientific help to local officials in determining the cause of unattended deaths. Individual counties of the State may join or leave the system by resolution of the Board of County Commissioners.

Counties in the system recommend a qualified physician as county medical examiner as well as additional qualified physicians who may act as assistant medical examiners. These examiners examine the circumstances of each unattended death. Pathologists perform autopsy examinations at the request of the county medical examiner. Toxicological analyses are provided by the toxicology laboratory at the University of North Carolina, established at the request of the Committee.

The Committee has the following composition: Dr. J. W. R. Norton, Raleigh, Chairman; Dr. K. M. Brinkhous, Chapel Hill, Secretary; Dr. T. D. Kinney, Durham; Dr. Harry Carpenter, Winston-Salem; Mr. Holt McPherson, High Point; Mr. Walter Anderson, State Bureau of Investigation, Raleigh; and Mr. Harold L. Waters, Department of Justice, Raleigh. Dr. R. H. Wagner serves as toxicologist.

At the present time there are nine counties active in the system. Guilford County has been active for a number of years and Transylvania County joined the system in 1962. In 1963, Wake, Caswell, Forsyth, Davidson and Davie Counties joined the system. In 1963, there were 758 deaths examined, as follows: Caswell, 2; Forsyth, 211; Guilford, 406; Transylvania, 20; and Wake, 119. Thus far Vance and Orange Counties have joined in 1964. Four other counties have been in the system at various times: Pope, Union, Wilkes and Cumberland.

Toxicological analyses are an integral part of this system and are provided without charge to the counties. The Toxicology Laboratory at Chapel Hill was set up especially for this purpose, both as to equipment and personnel. Service has also been provided for a limited number of examinations in counties not a part of the Medical Examiner System.

The laboratory is now prepared to carry out the following analyses:

(1) Quantitative and Qualitative Tests: Acetaldehyde, Acetone, Arsenic, Barbiturates, Bromides, Carbon monoxide, Carbon tetrachloride, Chloral hydrate, Chloroform, Cholinesterase activity. Cyanide, Ethyl alcohol, Fluorides, Formaldehyde, Isopropanol, Lead, Manganese, Meproamate, Mercury, Methemoglobin, Methyl alcohol, Nicotine, Pyribenzamine, Quinine, Salicylates, Sparine, Strychnine, and Trichloroethylene.



(2) Qualitative Tests Only. Alkaloids, Amphetamines, Antimony, Barbiturates, Bismuth, Demerol, Doriden, Morphine, Phenols, and Phosphorus.

(3) Analyses needed or in the process of development are: Quantitative analyses for other heavy metals; Blood lead; Glucosides; Toxins (Bacteriological assays); Gas chromatography of volatile materials; Thin layer chromatography; Infrared spectroscopy; and Atomic absorption spectroscopy.

In the biennium 285 cases were examined with 867 analyses. Each case appears to be different, often being an individual research problem.

The chief needs of the Medical Examiner System are related to methods making it more effective and generally available throughout the State. Development of a state-wide system with a full-time chief medical examiner would probably be the best solution once additional counties join the system.

The system has had particularly effective support from Mr. James C. Harper, Research Assistant in the Institute of Government. He was consulted with the Secretary of the Committee, with Medical Examiners, and with County Boards of Commissioners. In addition, he has given a number of talks to professional groups.

The aims of the Committee are to carry on the program as presently organized in a sound manner and to work for the gradual strengthening of the system. It is believed that a firm foundation is being built for a more widely available and accepted system.

J. W. R. Norton, Chairman  
K. M. Brinkhous, Secretary  
Committee on Postmortem Medicolegal  
Examination

## UNIVERSITY OF NORTH CAROLINA

### Laboratory of Toxicology

#### TOXICOLOGICAL ANALYSES PERFORMED JULY 1, 1963-JUNE 30, 1964

Medical Examiner System Cases	Total 65
Analysis	No. Performed
Alkaloids	2
Amphetamines	1
Arsenic	1
Barbiturates	17
Bromides	2
Carbon Monoxide	7
Chloral Hydrate	1
Cyanide	1
Ethanol	53
Formaldehyde	1
Glucose	2
Isopropanol	54
Methanol	55
Salicylates	2
Strychnine	1
	Total 200

Non-Medical Examiner System Cases	Total 32
Analysis	No. Performed
Arsenic	11
Barbiturates	1
Bromides	1
Carbon Monoxide	3
Choral Hydrate	1
Cholinesterase	2
Cyanide	4
Ethanol	14
Heavy Metals	3
Isopropanol	15
Lead	5
Methanol	18
Kidney Stones	3
	Total 81
Total No. Cases—97	Total No. Analyses—281

## UNIVERSITY OF NORTH CAROLINA

## Laboratory of Toxicology

## TOXICOLOGICAL ANALYSES PERFORMED JULY 1, 1963-JUNE 30, 1964

Medical Examiner System Cases	Total—163
Analysis	No. Performed
Alkaloids	3
Arsenic	9
Barbiturates	21
Bromides	2
Carbon Monoxide	20
Choral Hydrate	2
Cyanide	5
Ethanol	148
Formaldehyde	2
Glucose	3
Heavy Metals	5
Isopropanol	144
Lead	3
Manganese	1
Meprobamate	2
Methanol	144
Phosphorus	2
Salicylates	4
	Total 520

Non-Medical Examiner System Cases	Total—25
Analysis	No. Performed
Acetaldehyde	2
Alkaloids	1
Arsenic	1
Barbiturates	4
Carbon Monoxide	3
Cyanide	2
Ethanol	15
Formaldehyde	1
Heavy Metals	5
Isopropanol	13
Lead	3
Methanol	14
Salicylates	2
	Total 66
Total No. Cases—183	Total No. Analyses—586

## PUBLIC HEALTH CHRONOLOGY—1962-1964\*

1962—The State Board expressed full support of a five point program on traffic safety sponsored by the Governor's Coordinating Committee on Traffic Safety. The world-wide concern about the use of thalidomide as a tranquilizer was reported to the Board. The Board approved the use of oral vaccine for poliomyelitis for children entering school. Dr. Norton was elected to a one-year term as President of the American Public Health Association.

1963—Legislation sponsored by the State Board of Health in several areas was enacted by the 1963 General Assembly. These accomplished the following: made the State Board of Health the official Air Hygiene agency; set up minimum standards for county and city adoption on construction and operation of public swimming pools; improved death registration procedures; set up enabling legislation to permit local health departments to charge fees for certain home services; and established minimum standards for the sanitation of agricultural labor camps. The State Board was given responsibility for licensing combination nursing and boarding homes in addition to the previous licensure responsibility for nursing homes. Some other legal measures not originally sponsored by the State Board added responsibilities and activities. One empowered the Board to approve equipment and certify operators for the testing of the breath of drivers suspected of being under the influence of intoxicating beverages. The other law put upon the State Board the responsibility of informing local health directors so that they can notify mothers of more than two children born out of wedlock to report to their county welfare director. Dr. Charles R. Bugg, President of the State Board, died December 11, 1963, after an extended illness. The 1963 General Assembly transferred the State's mental health responsibility from the State Board of Health to a newly created Department of Mental Health which essentially was the former State Hospitals Board of Control.

1964—Dr. John S. Rhodes of Raleigh was elected by the Medical Society to fill the vacancy occasioned by the death of Dr. Charles R. Bugg. Dr. Lenox D. Baker of Durham was elected President of the Board, January 9, 1964. The State Board approved the general use of oral vaccine for poliomyelitis. Dr. Norton was named as an Honorary Fellow of the Royal Society of Health of Great Britain, and also an Honorary Fellow of the Public Health Association of Peru. Dr. Norton was invited by the Ford Foundation to accompany seven State Health Directors from India on a month's tour of health facilities of the United States. Dr. Norton was commissioned to evaluate the schools of public health in certain South American countries. Charles L. Harper, Director of the Administrative Services Division, resigned to accept the position as Associate Director for Administration for the Department of Public Health, District of Columbia, Washington. The "Smoking and Health" report of the Surgeon General's special committee was brought to the attention of the Board.

\* A Chronological report year by year from 1877 to 1952 is contained in the 34th Biennial Report covering the period, July 1, 1950-June 30, 1952, a similar report for the years 1952-1955 inclusive is contained in the 38th Biennial Report, and for the years 1956-1961 in the 39th Biennial Report.





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